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ABSTRACT

This classification of educational subject matter encompasses subject matter in preelementary through postdoctoral levels. As opposed to instructional programs, which represent the form and style by which knowledge is transmitted (such as nursing, college preparatory, or journalism programs), educational subject matter deals with the knowledge itself (such as English, psychology, or physical education). This classification of subject matter is intended to provide a single standardized scheme for reporting, recording, and exchanging data about subject matter. It will be of use in providing common data about subject matter over longitudinal studies, between instructional levels, and in local, state, and federal data reporting. The classification contains 22 first-order subject-matter areas from agriculture to social sciences. Within each area, subject matter is divided into second-order, third-order, and if necessary, fourth-order entries. A digit coding structure is also used to classify all entries. Definitions of each order and suborder of subject matter are provided. A lengthy appendix lists other means of classifying subject matter, including difficulty, by level of instruction, by organization providing instruction, and by type of instructional program. An alphabetical index of all orders and suborders is also included. (Author/JM)

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A CLASSIFICATION OF EDUCATIONAL SUBJECT MATTER

01.01 **AGRICULTURAL ECONOMICS**
01 01 01 Agricultural Appraisal
01.01 02 Agricultural Credit and Finance
01.01 03 Agricultural Marketi
01.01 04 Agricultural Organiz
01 01 05 Agricultural Supplie
01.01 06 Economic Develop
Trade
01.01 07 Farm and Ranch Ma
01 01 08 Public Policy and Ag
01.01 99 Other Agricultural E

01.02 **AGRICULTURAL E**
Engineering and Engi

01.03 **AGRICULTURAL TE**
01 03 01 Agricultural Design
tenance
01 03 02 Agricultural Electr
01 03 03 Agricultural Materi
01 03 04 Agricultural Mecha
01 03 05 Agricultural Proces
01 03 06 Agricultural Storag
01 03 07 Agricultural Transpo
01 03 08 Agricultural Waste C
01 03 99 Other Agricultural T

01.04 **ANIMAL SCIENCES**
01 04 01 Anim al Anatomy an
01.04 02 Animal or Animal
Evaluation
01 04 03 Animal Diseases, Pa
01 04 04 Animal Genetics an
01 04 05 Animal Health and
01 04 06 Animal Management and Production
01 04 07 Animal Nutrition
01 04 99 Other Animal Sciences (Specify)

01 05 05 Turf Grass
01.05 99 Other Ornamental Horticulture (Specify)

PLANT SCIENCES
01 Plant Anatomy and Physiology
02 Plant Genetics and Reproduction
03 Plant Insects and Control
04 Plant Management and Production
01 Production of Field Crops
02 Production of Fruits
03 Production of Specialty Crops
04 Production of Vegetables
Plant Nutrition
Plant Pathogens and Prevention
Plant or Plant Products Selection and Evalua tion
99 Other Plant Sciences (Specify)

SOIL SCIENCES
Soil Chemistry
Soil Classification
Soil Conservation and Land Use
Soil Fertility
Soil Physics
Soil Texture
Other Soil Sciences (Specify)

FISHERIES
01 08 0 Fisheries Biology
01.08 0 Fisheries Management
01 08 0 1 Commercial Fisheries
01 08 0 2 Nonedible Water Life
01 08 0 3 Sport Fisheries
01.08 99 Other Fisheries (Specify)

01.09 **FORESTRY**
01.09 01 Forest Management and Administration
01 09 01 01 Forest Economics

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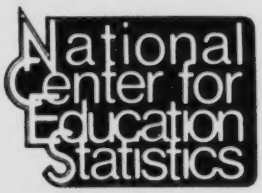

NATIONAL CENTER FOR EDUCATION STATISTICS

"The purpose of the Center shall be to collect and disseminate statistics and other data related to education in the United States and in other nations. The Center shall . . . collect, collate, and, from time to time, report full and complete statistics on the conditions of education in the United States; conduct and publish reports on specialized analyses of the meaning and significance of such statistics; . . . and review and report on education activities in foreign countries."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e-1).

This project was conceived and most of the work was done in the National Center for Education Statistics' former Division of Intergovernmental Statistics and its Educational Data Standards Branch, headed by Absalom Simms and Allan R. Lichtenberger, respectively.

The manuscript for the handbook was developed by Educational Management Services, Inc., under contract No. 300760008 with the National Center for Education Statistics. James R. Sherman, Ph.D. served as Project Director and Principal Investigator.

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FOREWORD

On July 24, 1975, the National Center for Education Statistics (NCES) awarded a 2-year contract to Educational Management Services, Inc. (EMS) of Minneapolis, Minnesota, to develop a classification of educational subject matter. This document represents the culmination of that 2-year effort to produce a single comprehensive recording and reporting scheme that will serve the needs of educational agencies and institutions throughout the United States. The charge by NCES was formidable. It was met through the cumulative efforts of many people.

A 20-member National Planning Council advised NCES and EMS on the project approach, the content and format of the document, the numerical coding and classification structure, and the subject-matter elements and additional dimensions. EMS requested nominations for the Council from a variety of educational associations whose members represented various levels of education, types of educational institutions, educational agencies, consortia, and coordinating bodies. A list of candidates was then prepared that featured a broad geographic distribution and equal representation of major educational affiliations. NCES selected the 20 Council members from this list in December, 1975.

Twenty-one Ad Hoc Subject-Matter Committees were also involved in the development process. They advised NCES and EMS on the content and structure of the document and on the definitions of subject-matter elements. Nominations for membership on the Ad Hoc Committees were sought from educational associations whose members were affiliated with specific subject-matter areas. EMS listed the nominees under one of the 22 initial subject-matter areas in accordance with their area of expertise, geographic distribution, and representation by level and type of educational agency and institution. The committee recommendations were then sent to NCES for selection.

NCES established an eight-member committee in Washington of people from the Education Division and from other Federal agencies involved in educational data collection and reporting. They met with EMS staff after each Planning Council meeting to discuss the status of the project and the structure and form of the Classification.

Three outside consultants were enlisted by NCES and EMS to lend their expertise and to provide overall advice and assistance through the project.

Over 150 individuals, representing a variety of organizations, agencies, and institutions asked for and received one or more drafts of the Classification. Their reviews and critical comments proved to be extremely valuable.

The document was produced in three successive drafts prior to submission in final form to NCES. The first draft was produced in November, 1975 following an extensive review of the literature and existing classification systems. Federal and State classification documents and reporting forms were perused, as were those of the United Nations (UNESCO), regional accrediting bodies, private agencies, and professional societies.

The first draft was sent to all members of the National Planning Council and the Ad Hoc Subject-Matter Committees, as well as to several selected readers. The Council and the Committees met early in the spring of 1976 to discuss the draft with NCES and EMS staff members and to suggest revisions and modifications. Following an extensive period of review and modification, EMS prepared a second draft in August, 1976 and submitted it for review. The National Planning Council and the Ad Hoc Subject-Matter Committees met to discuss the second draft in the fall of 1976. The second review led to the production of a third draft which was mailed out in March, 1977. The members of the Ad Hoc Committees reviewed the third draft by mail, but the National Planning Council met to discuss their review at their final meeting in Minneapolis in May, 1977. The document underwent final revisions and modifications during the 2 months following the Planning Council meeting, and the final copy was delivered to NCES in July , 1977.

Those who worked on this project made special efforts to maintain sensitivity to the needs of those individuals responsible for collecting, recording, reporting, analyzing, interpreting, and disseminating data about subject matter. It is hoped that this Classification will serve to make their tasks easier.

David B. Orr
Acting Director, Division of
Elementary and Secondary
Education Statistics

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CHAPTER 1
INTRODUCTION

This document is a classification of educational subject matter as it currently exists from pre-elementary through post-doctoral levels. As a single, coherent system for classifying subject matter regardless of the level of instruction, type of institution, or source of support, it represents a necessary step toward the improvement of existing data collection, recording, and reporting procedures at all levels of education.

This document is not a classification of instructional programs, nor should it be used as such. It is a subjective array of knowledge that is presently known to exist in American education. Subject matter represents the substance, manifestation, and countenance of knowledge. Instructional programs, which can and should be differentiated from subject matter, represent the form and style by which knowledge, or subject matter, is transmitted and received. Instructional programs can be defined in terms of the subject matter of which they are composed, or of experiences such as internships, practicums, and field trips. The schematic matrix in the chart illustrates the relationship between instructional programs and subject matter. A matrix like the one shown is unique to institutions as well as to students, but it does display the relationship between these two educational dimensions.

This document does not replace either of the two current and most widely used classifications of subject matter and related instructional programs. Since 1971, the *Standard Terminology for Curriculum and Instruction in Local and State School Systems* (Handbook VI of the State Educational Records and Report Series) has been widely used for a variety of purposes by local, State, and Federal institutions and agencies in recording and reporting data on elementary, secondary, and vocational-technical education. *A Taxonomy of Instructional Programs in Higher Education* (HEGIS Taxonomy), published by the Higher Education Surveys Branch of the National Center for Education Statistics in 1971, has served similar purposes in postsecondary education.

Ultimately, an instructional program classification will be developed that will complement this classification of subject matter and will replace both Handbook VI and the HEGIS Taxonomy. Until that is accomplished, data about instructional programs should be recorded and reported according to the formats and classification categories of the HEGIS Taxonomy for higher education, or Handbook VI for elementary, secondary, and vocational-technical education. This subject-matter classification should not be used for classifying instructional programs.

The distinctions between instructional programs and subject matter were particularly troublesome to those who helped develop this Classification. The distinctions between the two are discussed further in appendix D, where illustrative examples of instructional programs in elementary, secondary, and vocational-technical education are also provided.

Illustrative instructional programs

	Business Administration	Journalism	Fine Arts	Nursing	Social Sciences	College Preparatory	Total Students, Credits, Dollars Etc.
Accounting	x	x			x	x	
Speech Communication	x	x	x	x	x	x	
Data Processing	x						
Music			x		x		
English	x	x	x	x	x	x	
Algebra	x			x	x	x	
Biology			x	x		x	
Physical Education		x		x	x	x	
Psychology	x	x	x	x	x	x	
Economics	x				x		
Total students, credits, dollars etc. →							

Subject Matter – Program Matrix

This document does not propose to serve as a framework for the organization of educational agencies or institutions or for their departments or divisions. Any resemblance to existing organizational structures is unintentional. The subject-matter areas that constitute the framework for the hierarchical array were established subjectively in consultation with over two hundred people, most of whom served on project committees.

NEED FOR A SUBJECT-MATTER CLASSIFICATION

This classification of educational subject matter was developed in response to the needs of people involved in data gathering and reporting in all levels and types of educational agencies and institutions. More specifically, the following developments have made it necessary to have a comprehensive subject-matter classification:

- Although it is a classification of instructional programs, the HEGIS Taxonomy has been used in many instances to identify postsecondary subject matter.
- Technical subject matter found in vocational-technical institutes and in community and junior colleges can be—and currently is—reported under both the HEGIS Taxonomy and Handbook VI. Resulting data are neither comparable nor compatible. This Classification provides a single reporting scheme that should alleviate these problems.
- Secondary schools are increasingly offering subject matter that has traditionally been the province of postsecondary education. To a lesser extent, the reverse is also true as postsecondary institutions offer courses at the secondary level as elements of adult-basic or remedial programs. Neither the HEGIS Taxonomy nor Handbook VI accommodate what appears to be a crossing over of students between the two separate levels of instruction and organization. This Classification will allow for joint reporting of identical data between different levels.
- In postsecondary education, an increasing number of institutions are awarding credit for instruction taken elsewhere. Degrees may be awarded by agencies that do not themselves offer certain instruction, but rather assess learning based entirely on work done in other educational settings. This emerging educational practice will benefit from the reasonably precise definitions contained in this Classification but not in the HEGIS Taxonomy.
- There is a mixture of instructional programs and subject-matter elements in the classifications in Handbook VI that is of concern in elementary and secondary education. As public school systems are becoming increasingly more involved in providing unique programs for students with special educational needs, this limitation of Handbook VI is becoming more of a problem. By separating subject matter from programs, this Classification should help to simplify complex reporting problems.

In general, the primary reason for developing this Classification was to provide a single, standardized scheme which will facilitate the recording, reporting, and exchange of data about subject matter. Although directed primarily toward formal educational agencies and institutions, the document will facilitate communication and understanding among a wide range of people having different interests and needs related to subject matter. It will be particularly useful to Federal, State, and local government and education agencies, and to all institutions involved in administering, operating, evaluating, and funding educational activities.

EXAMPLES OF USE

The examples of use that are described below are illustrative but not exhaustive. Although the developers of the Classification were aware of several obvious uses, they recognize that there may very well be many more uses that cannot now be anticipated. Future use of the document should not be constrained by the lack of documentation of all possible applications.

Subject-matter data are not collected in a vacuum. There are no measures of subject matter as such. Data are categorized by subject-matter areas but reflect such characteristics as the number of courses in a particular subject matter, the number of students who are enrolled, the number of faculty who are teaching, or the number of dollars that are being consumed. In considering the following uses, it should be noted that the data which will be recorded and reported will be quantified by a number of indices such as credits, enrollments, and dollars, to which subject-matter identifiers will be attached. The data that will be collected will not be different from the data that have been collected in the past. Only the categories in which the data will be classified will be different.

Use in Longitudinal Studies

Educational planners would like to be able to trace an individual's academic pursuits from early childhood to an undefinable point in life when formal education is no longer sought. When one considers the continuing educational programs now in existence, that end-point may occur only at death. If students are identified by common data-elements, their progress through the educational continuum can be analyzed. Significant decision points, as when students select alternative courses of study, can be identified and dealt with by using a uniform classification of subject matter. Progress toward educational objectives can be assessed on a time-line in accordance with the completion of specific subject-matter competencies. At present, many students become lost to gross analytic assessment when they move from one educational subsystem to another (e.g., from a professional school to a continuing professional education program). Well-defined subject-matter elements that can be universally recognized, with no qualifying concern for the nature or level of the student, will be extremely useful in longitudinal studies.

Use Between Instructional Levels

Categorization of educational level with respect to age and competency appears to be decreasing significantly. Many of the "rites of passage" from one educational level to another have been eliminated to accommodate student enrollment at multiple levels or to allow for competency-based education programs. Subject-matter data must not only be continuous, but contiguous as well, so that agency or institutional student data may be transferred from one educational setting to another. A uniform classification of subject matter, unencumbered by organizational descriptors, will facilitate student entry, transfer, exit, and re-entry when combined with other dimensions of educational data.

Use in Reporting Data

A standard classification of subject matter will facilitate compliance with the statutory reporting requirements for local, State, and Federal educational agencies and institutions. Uniform terminology and structure will facilitate the collection and recording of data, which is the first step of the reporting process. A comprehensive classification for all education can be used to expedite communication and information exchange about subject matter regardless of the type or location of the organization providing instruction.

Use as a Reference Document

A comprehensive subject-matter classification can serve a very useful purpose as a reference document. The person using the Classification can discover not only the many elements of instruction but also the hierarchical relationships that tie those elements together. This will be particularly beneficial for students and their counselors as they explore alternative courses of study in a variety of agencies and institutions. The Classification can also serve as a reference for curriculum development and academic planning purposes.

Avoiding Misuse

In considering how the Classification should be used, it is also appropriate to mention how it should not be used. As discussed earlier, it is not a classification of instructional programs. It is not a proposed framework or model for the organization of agencies or institutions or of divisions or departments within them. The Classification is not an outline for instruction or a specification of how subject matter should be taught. It is not a structure or pattern for agency, institutional, State, or Federal funding. And finally, the Classification does not incorporate value judgments concerning the relative merits of subject-matter areas. Hierarchical rank is related to subject-matter genesis, not to perceived value or importance of particular areas of knowledge.

DEVELOPMENT OF THE CLASSIFICATION

This Classification was developed through extensive research and formal and informal advice and consultation. Several formal committees were established to assist in building the coded structures and in writing definitions. Their membership is detailed in the acknowledgments. Briefly, these committees consisted of the following:

- Twenty-two Ad Hoc Subject-Matter Committees that dealt with each of the first-order subject-matter areas. The nearly 200 members were selected because of their affiliation with and knowledge of specific subject matter.
- A 20-member National Planning Council composed, for the most part, of representatives of a variety of national education associations and State and local agencies.
- An eight-member Washington-based committee composed of selected persons from the National Center for Education Statistics, as well as from other Federal agencies concerned with education data.

Over a period of 2 years, three successive and relatively complete drafts of the Classification were reviewed by these committees. The drafts were also mailed to over 150 interested individuals and association representatives for comment and criticism. This broadly based assistance was of great value to the development of the Classification, for it took place within flexible guidelines and objectives that became stabilized only as consensus was achieved by the large and diverse consulting group.

Understanding of the Classification will be enhanced by a review of the three major areas in which development of the document was conducted: 1) the procedures for classifying subject matter, 2) the coding structure, and 3) the criteria for developing entries in the Classification. These are discussed in the following sections.

Procedures for Classifying Subject Matter

The procedures followed in the classification process included limiting consideration to current and commonly found subject matter, requiring a hierarchical listing, and excluding course level detail.

Current and Common Usage. Only subject matter that was known to be currently in use in formal education settings was included. The elements were chosen on the basis of subjective committee consensus rather than formal theoretical considerations. Validation of the document will occur through general use, the development of related classifications, and periodic revision. The Classification was not intended to be exhaustive. Included in it are only those subject-matter elements that are most commonly found and understood in formal educational agencies and institutions and about which data are routinely collected and reported.

Hierarchical Array. The subject-matter elements are presented in a hierarchical array to facilitate data aggregation and data recording and reporting. The areas represent what the Ad Hoc Committees and others identified as generally accepted classes of subject matter. First-order designations have been established through consensus and are considered to be representative of the major categories for classifying knowledge. Second-order, third-order, and fourth-order entries are considered to be natural subdivisions of the major subject-matter areas—that is, to have their genesis in an aggregate hierarchical order.

Exclusion of Course Level Detail. Subject-matter entries comprise elements that users may disaggregate into finer detail to reflect course titles. It is recognized, however, that any element at any level can be used to identify a course and a course can be developed for any subject-matter element. But as long as the element can be broken down into subelements, the entry is considered subject matter and not a course, which the developers of the Classification felt was the lowest level of disaggregation.

Coding Structure

There are 22 first-order subject-matter areas in the Classification. These areas represent a subjective judgment about a

reasonable number of categories into which knowledge can be classified for recording and reporting purposes. All subject matter could have been listed in alphabetical order without these aggregations, but to have done so would have been to ignore the natural groupings of subject matter that are derived from long experience with curriculums on the part of educational agencies and institutions. To allow for greater detail, a subject-matter area is disaggregated into descending hierarchical levels that are designated "Orders."

The coding structure is characterized by the use of two digits for each order in the Classification. The first-order, representing the subject-matter area, is indicated by the first two digits. Each subsequent two digits represent another descending order of subject matter. Schematically, this may be represented as follows:

03 ARTS, VISUAL AND PERFORMING (First Order, Subject-Matter Area)

03.03 MUSIC (Second Order)

03.03 02 Music Studies (Third Order)
03.03 02 03 Music Theory (Fourth Order)

The potential four-order, eight-digit coding structure for the Classification allows reasonable detail but avoids many problems associated with a larger number of orders. The structure also appears satisfactory for subject-matter data collection and reporting to the degree now required at State and Federal levels. The purposes for which data are collected in specific instances will determine the required extent of detail, which might be greater or less than the four-order, eight-digit structure provides.

Criteria for Developing Entries

The importance of genetic categories of subject matter—that is, of subject-matter elements that have their genesis in the definition of the first-order or other higher-order category—was stressed throughout the development of the Classification. The importance of single entries and integrity of subject matter was also stressed. The committees were asked to develop entries for their areas under four broadly defined criteria: maturity, universality, magnitude, and relationship.

Maturity. The subject-matter elements should have been in use long enough to be commonly understood and accepted throughout the educational community. New areas of knowledge were included if they were currently recognized by all members of the committee, but esoteric descriptions that were perceived as new titles for well-established subject-matter elements were discarded.

Universality. In general, a subject-matter element should be found throughout a broad range of formal educational settings. This excluded, for example, limited offerings in a highly restricted program to which minimal resources would be devoted. Universality can apply in several ways. Certain subject matter can be found throughout the Nation at specific levels or within special institutions such as law schools. On the other hand, subject matter may be universally found throughout all types of educational agencies or institutions, but within a restricted geographic area, as is generally the case with Oceanography.

Magnitude. This criterion was applied to numbers of students enrolled, number of classes taught, amount of resources consumed, or any other characteristic of size or number. Its application was a matter of judgment. An indication of great magnitude did not of itself determine the way subject matter was treated. Even though subject matter might be studied by nearly every elementary and secondary student in the Nation and taught at virtually all colleges and universities, it might still be subsumed under a higher-order designation.

Relationships. There generally exist natural relationships among subject-matter elements. Thus, Chiropractic, Dentistry, Medicine, and Veterinary Medicine are all grouped together because of their concern with Health Care and Health Sciences. On the other hand, subject-matter elements are sometimes grouped together because of incidental factors or somewhat artificial relationships. For example, Surveying is incidentally related to Engineering in much the way as Mathematics is to Physics. But Surveying is an entry under Engineering because the relationship, even though an incidental one, was deemed to be relatively strong. In either case, the judgments and reasonable compromises of the committees and consultants produced the array of subject matter.

ORGANIZATION OF THE CLASSIFICATION

This Classification is organized to serve the needs of those responsible for data recording and reporting at all levels of education. This first chapter provides an introduction to the document and describes how it may be used.

Chapter 2 consists of a hierarchical array of subject matter for all of education. The chapter is divided into 22 sections, each representing a designated area of subject matter. Within each area, subject matter is disaggregated to second-order, third-order, and sometimes fourth-order entries. In some instances, the array is structured alphabetically. In others, the entries are arranged according to the relationships they have with each other.

Chapter 3 contains definitions for each of the entries found in chapter 2. The array by subject-matter area is the same for both chapters, and page references for chapter 3 are also shown in figure 2. The definitions are intended to facilitate classification of subject matter for data recording and reporting purposes.

Following the main body of the document are five appendixes which can be used to add additional dimensions to the subject-matter entries: Difficulty of Subject Matter, Level of Subject-Matter Instruction, Organization Providing Instruction, Type of Instructional Program, and Multiple Subject Matter (Interdisciplinary). The appendixes are followed by the glossary, acknowledgments, bibliography, and index.

HOW TO USE THE SUBJECT-MATTER CLASSIFICATION

Each subject-matter area represents a branch of knowledge as it presently exists in American education. When that knowl-

edge is organized, combined with other learning experiences, and provided for instruction to students, it appears as a basic unit of instruction.

This basic unit of instruction can be defined as a planned series of learning activities or experiences developed around a limited scope of subject matter. These activities or experiences have predetermined, stated objectives, a definite beginning and end, a specified learner population, and a means of assessing the learning that has taken place. An instructional course is an example of a basic unit of instruction.

Classification of Data About Subject Matter

Subject-matter elements will be used to classify data such as the number of students enrolled in a basic unit of instruction, the number of faculty being utilized, or the number of dollars being consumed. In some cases, there will be a one-to-one relationship between subject-matter titles and those used to identify basic units. In other instances, subject-matter titles will subsume several basic units.

Aggregate Subject Matter

If a basic unit of instruction, such as a course, consists of a combination of two or more subject-matter elements, and if the subject-matter elements are subelements of a single and more aggregate entry, the aggregate entry will be used for coding. The aggregate entry may appear at the first-order, second-order, or third-order. First-order entries will use the subject-matter area title and two-digit code. The title and definition of the subject-matter element will assist in identifying the basic unit of instruction.

For example, a unit of instruction may involve the combination of three second-order elements, such as Environmental Design, Construction and Design Implementation, and Communication in Architecture and Environmental Design. If presented separately, these three elements would appear as follows:

02.01	Environmental Design
02.03	Construction and Design Implementation
02.04	Communication in Architecture and Environmental Design

If they are completely integrated into a single unit, and if their content cannot be separated, they will be coded according to the aggregate entry of which they are a part. In this case, it is the subject-matter area designation.

02	Architecture and Environmental Design

The same procedure will hold for the combination of third-order elements such as the two listed below:

02.04 03	Rendering
02.04 04	Model Building

If these two are integrated into a single unit, and if their content cannot be separated, they will be coded under 02.04—Communication in Architecture and Environmental Design, the second-order element of which they are a part.

Combinations Within Subject-Matter Areas (Multiple Subject Matter)

If a basic unit of instruction consists of two or more distinct subject-matter elements within a single first-order subject matter area, the basic unit will be reported as Multiple Subject Matter (Interdisciplinary). Each of the elements will retain its identity, and it will be possible to separate their content out of the combination. The coding, recording, and reporting of multiple subject matter is dealt with in appendix E.

Combinations Between Subject-Matter Areas (Multiple Subject Matter)

If a basic unit of instruction consists of two or more distinct subject-matter elements which are found in separate subject-matter areas, they will also be reported as Multiple Subject Matter (Interdisciplinary). The coding, recording, and reporting of these combinations are also dealt with in appendix E.

Introductory Subject Matter

Units of instruction which deal with general or introductory topics will be coded at aggregate subject-matter levels. The more general the topic, the more aggregate the subject-matter coding.

Data that are coded at an aggregate level will include all, or most, of the subject-matter elements within the aggregate listing as well as subject matter that represents general or introductory topics. If greater detail is required, the data should be disaggregated for each element, but the data for general or introductory material should remain at the aggregate level. An introductory course in Biology, for example, will be coded 15.03 Biology, even if it is composed of several topics in Biology. If identification of the topics is necessary, the data being recorded can be divided and spread over two or more disaggregate entries such as General Botany or General Zoology, according to their respective degrees of emphasis.

Unlisted Subject Matter

The developers of this subject-matter classification did their best to identify and include the most prevalent subject matter in American education. At the same time, they realized that additional elements could emerge as knowledge expands in the future. If subject-matter elements cannot be found in this Classification for data that must be recorded or reported, then the "Other" category, coded XX. . .99, should be used. Data should be recorded under "Other" only if it represents unlisted subject matter, and only if it cannot be subsumed under an aggregate, general, or introductory listing that already exists.

When elements that are recorded under "Other" are to be combined, as multiple subject matter, they should be given an alphanumeric code appropriate to the second-order category of which they are a part, but ending in "99." Other Agricultural Economics, for example, would be coded A99 when appearing in a multiple subject-matter combination.

Amount of Detail

The structure and content of the Classification reflect the subjective judgments and consensus of those who developed it. Although it appears that all areas of knowledge have been identified, some subject-matter elements represent greater detail than others. Review of the numerous drafts of the document indicates that the amount of detail is appropriate for the

elements that are included. Use of the Classification will validate the structure and content and will dictate the need for future disaggregation of existing elements.

Additional Codes

Subject-matter codes identify the branch of knowledge in which data are found. Additional codes may be extracted from the appendixes to this Classification if greater precision is needed to identify the subject matter of basic units of instruction. Coded entries are provided for Difficulty of Subject Matter, Level of Subject-Matter Instruction, Organization Providing Instruction, and Type of Instructional Program. Additional codes, not listed in this document, may also be applied for unique institutional or agency purposes.

The manner in which additional codes will be used to enhance the recording and reporting of subject-matter data will be dependent upon the form and content of data documents, and upon data collection and processing techniques.

CHAPTER 2
CODED CLASSIFICATION OF EDUCATIONAL SUBJECT MATTER

This chapter contains the coded structure of the Classification of Educational Subject Matter. The structure is divided into 22 subject-matter areas and an additional area for handling multiple subject-matter elements. Combinations of subject matter should be identified as multiple subject matter and coded, recorded, and reported according to the directions given in appendix E.

01 AGRICULTURE AND RENEWABLE NATURAL RESOURCES

Agricultural Engineering is listed in the subject-matter area of Engineering and Engineering Technology, but Agricultural Technology is included here. Animal Sciences includes the general care of animals as factors of production. The medical treatment of animals is included in Veterinary Medical Sciences in the subject-matter area of Health Care and Health Sciences. Agricultural Economics is included in this area, but the broad subject matter of Economics is included under Social Sciences and Social Studies. The elements within Plant Sciences are differentiated from similar elements in the area of Life Sciences and Physical Sciences by their emphasis on food and fiber production. Many of the elements listed here are closely related to those of Biology, and care should be exercised in the identification of basic units of instruction.

01.01	**AGRICULTURAL ECONOMICS**
01.01 01	Agricultural Appraisal
01.01 02	Agricultural Credit and Finance
01.01 03	Agricultural Marketing
01.01 04	Agricultural Organizations
01.01 05	Agricultural Supplies
01.01 06	Economic Development and International Trade
01.01 07	Farm and Ranch Management
01.01 08	Public Policy and Agriculture
01.01 99	Other Agricultural Economics (Specify)
01.02	**AGRICULTURAL ENGINEERING (See 08 – Engineering and Engineering Technology)**
01.03	**AGRICULTURAL TECHNOLOGY**
01.03 01	Agricultural Design, Construction, and Maintenance
01.03 02	Agricultural Electrification
01.03 03	Agricultural Materials Handling
01.03 04	Agricultural Mechanics
01.03 05	Agricultural Processing
01.03 06	Agricultural Storage
01.03 07	Agricultural Transportation
01.03 08	Agricultural Waste Control
01.03 99	Other Agricultural Technology (Specify)
01.04	**ANIMAL SCIENCES**
01.04 01	Animal Anatomy and Physiology
01.04 02	Animal or Animal Products Selection and Evaluation
01.04 03	Animal Diseases, Parasites, and Insects
01.04 04	Animal Genetics and Reproduction
01.04 05	Animal Health and Care
01.04 06	Animal Management and Production
01.04 07	Animal Nutrition
01.04 99	Other Animal Sciences (Specify)
01.05	**ORNAMENTAL HORTICULTURE**
01.05 01	Arboriculture
01.05 02	Floriculture
01.05 03	Greenhouse and Nursery
01.05 04	Landscaping
01.05 05	Turf Grass
01.05 99	Other Ornamental Horticulture (Specify)
01.06	**PLANT SCIENCES**
01.06 01	Plant Anatomy and Physiology
01.06 02	Plant Genetics and Reproduction
01.06 03	Plant Insects and Control
01.06 04	Plant Management and Production
01.06 04 01	Production of Field Crops
01.06 04 02	Production of Fruits
01.06 04 03	Production of Specialty Crops
01.06 04 04	Production of Vegetables
01.06 05	Plant Nutrition
01.06 06	Plant Pathogens and Prevention
01.06 07	Plant or Plant Products Selection and Evaluation
01.06 99	Other Plant Sciences (Specify)
01.07	**SOIL SCIENCES**
01.07 01	Soil Chemistry
01.07 02	Soil Classification

NOTE:—Combinations of subject matter in Agriculture and Renewable Natural Resources should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

01.07 03 Soil Conservation and Land Use
01.07 04 Soil Fertility
01.07 05 Soil Physics
01.07 06 Soil Texture
01.07 99 Other Soil Sciences (Specify)

01.08 FISHERIES

01.08 01 Fisheries Biology
01.08 02 Fisheries Management

01.08 02 01 Commercial Fisheries
01.08 02 02 Nonedible Water Life
01.08 02 03 Sport Fisheries

01.08 99 Other Fisheries (Specify)

01.09 FORESTRY

01.09 01 Forest Management and Administration

01.09 01 01 Forest Economics
01.09 01 02 Forest Harvesting
01.09 01 03 Forest Fire Control and Use
01.09 01 04 Forest Land-Use Planning
01.09 01 05 Forest Measurements
01.09 01 06 Forest Watershed Management and Hydrology

01.09 02 Forest Biology

01.09 02 01 Dendrology
01.09 02 02 Silvics
01.09 02 03 Silviculture
01.09 02 04 Tree Improvement

01.09 03 Forest Products and Wood Technology

01.09 03 01 Lumber Manufacturing
01.09 03 02 Paper Manufacturing
01.09 03 03 Plywood Manufacturing
01.09 03 04 Pulp Manufacturing
01.09 03 05 Physical Properties of Wood
01.09 03 06 Wood Anatomy
01.09 03 07 Wood Chemistry
01.09 03 08 Wood Identification
01.09 03 09 Wood Preservation

01.09 99 Other Forestry (Specify)

01.10 OUTDOOR RECREATION

01.11 RANGE SCIENCE

01.11 01 Range Administration
01.11 02 Range Biology
01.11 99 Other Range Science (Specify)

01.12 WILDLIFE

01.12 01 Wildlife Biology
01.12 02 Wildlife Management
01.12 99 Other Wildlife (Specify)

01.13 LAND RECLAMATION

01.14 RENEWABLE NATURAL RESOURCES

01.99 OTHER AGRICULTURE AND RENEWABLE NATURAL RESOURCES (SPECIFY)

02 ARCHITECTURE AND ENVIRONMENTAL DESIGN

Subject-matter elements in this area deal with the design of environments as well as the management of construction. Virtually all subject matter related to environmental planning has been included in this subject-matter area. Engineering theory and design involved in building and environmental systems are found in the area of Engineering and Engineering Technology. Elements relating to construction skills can be found in the subject-matter area of Industrial Arts, Trades, and Technology.

02.01 ENVIRONMENTAL DESIGN

02.01 01 Architectural Design
02.01 02 Landscape Architectural Design

02.01 02 01 Grading
02.01 02 02 Planting

02.01 03 Interior Design
02.01 04 Urban Design
02.01 05 Graphic Design
02.01 99 Other Environmental Design (Specify)

02.02 DESIGN AND PLANNING TECHNOLOGY

02.02 01 Design Programing
02.02 02 Budgeting and Cost Analysis
02.02 03 Site Analysis
02.02 04 Landscape Assessment
02.02 05 Codes and Controls
02.02 06 Design Specializations

02.02 06 01 Marine Architecture
02.02 06 02 Recreation and Sports Area Design
02.02 06 03 Temporary Structures
02.02 06 04 Preservation and Restoration

02.02 99 Other Design and Planning Technology (Specify)

02.03 CONSTRUCTION AND DESIGN IMPLEMENTATION

02.03 01 Construction Technology
02.03 02 Construction Management
02.03 99 Other Construction (Specify)

02.04 COMMUNICATION IN ARCHITECTURE AND ENVIRONMENTAL DESIGN

02.04 01 Graphic Communication
02.04 02 Architectural Drafting
02.04 03 Rendering
02.04 04 Model Building
02.04 05 Contract Documents

02.04 05 01 Construction Drawings
02.04 05 02 Specifications

02.04 99 Other Communication in Architecture and Environmental Design (Specify)

NOTE:—Combinations of subject matter in Architecture and Environmental Design should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

02.05 STRUCTURAL TECHNOLOGY

02.05 01 Steel Structures
02.05 02 Concrete Structures
02.05 03 Wood Structures
02.05 04 Unit Masonry
02.05 05 Combined Structures
02.05 99 Other Structural Technology (Specify)

02.06 ENVIRONMENTAL TECHNOLOGY

02.06 01 Environmental and Energy Systems

02.06 01 01 Heating and Air Conditioning
02.06 01 02 Lighting (Interior and Exterior)
02.06 01 03 Plumbing
02.06 01 04 Storm Drainage
02.06 01 05 Irrigation
02.06 01 06 Alternative Energy Systems

02.06 02 Acoustics
02.06 03 Building Transportation Systems

02.06 03 01 Elevators
02.06 03 02 Escalators
02.06 03 03 Moving Walkways

02.06 99 Other Environmental Technology (Specify)

02.07 MATERIALS OF ARCHITECTURE AND ENVIRONMENTAL DESIGN

02.07 01 Construction Materials
02.07 02 Plant Materials
02.07 03 Interior Components
02.07 99 Other Materials of Architecture and Environmental Design (Specify)

02.08 GENERAL PERSPECTIVES OF ARCHITECTURE AND ENVIRONMENTAL DESIGN

02.08 01 History of Environments

02.08 01 01 Architectural History
02.08 01 02 Landscape Architectural History
02.08 01 03 Interior Architectural History
02.08 01 04 Planning History

02.08 02 Professional Practices in Architecture and Environmental Design
02.08 03 Post-Construction Management
02.08 99 Other General Perspectives of Architecture and Environmental Design (Specify)

02.09 PLANNING

02.09 01 Community Development Planning
02.09 02 Housing Planning
02.09 03 Land Use Planning
02.09 04 Natural Resource Planning
02.09 05 Open Space Planning
02.09 06 Recreation Resources Planning
02.09 07 Social Planning
02.09 08 Economic Planning
02.09 09 Transportation Planning

02.09 09 01 Vehicular
02.09 09 02 Pedestrian
02.09 09 03 Mass Transit

02.09 10 Urban, Regional and Other Planning
02.09 11 Water Resources Planning
02.09 12 Environmental Planning
02.09 13 Historic Preservation Planning
02.09 99 Other Planning (Specify)

02.99 OTHER ARCHITECTURE AND ENVIRONMENTAL DESIGN (SPECIFY)

03 ARTS, VISUAL AND PERFORMING

Dance is listed in this area as an aesthetic art form. It is also listed in the area of Physical Education, Health Education, and Leisure where the emphasis is on the physical activity. Film as an artistic medium is included in this area. The knowledge of Film for the transmission of messages is included in the subject-matter area of Communication. Arts Therapy in this subject-matter area should be differentiated from the formalized medical therapy that is included in the area of Health Care and Health Sciences.

03.01 DANCE (See 19.04 – Dance)

03.01 01 Dance Studio and Performance
03.01 02 Dance Studies
03.01 03 Dance in Education
03.01 99 Other Dance (Specify)

03.02 FILM AS ART (See 05.03 – Film as Communication)

03.02 01 Art Film Production
03.02 02 Art Film Studies
03.02 99 Other Film as Art (Specify)

03.03 MUSIC

03.03 01 Music Studio and Performance

03.03 01 01 Applied Instrumental and Vocal Music
03.03 01 02 Ensembles

03.03 02 Music Studies

03.03 02 01 Music Literature
03.03 02 02 Music History, Musicology, and Criticism
03.03 02 03 Music Theory
03.03 02 04 Music Composition
03.03 02 05 Music Conducting
03.03 02 06 Ethnomusicology
03.03 02 07 Church Music

03.03 03 Music in Education
03.03 04 Commercial Music
03.03 05 Musical Instrument Design, Maintenance, and Repair
03.03 99 Other Music (Specify)

03.04 THEATRE ARTS

03.04 01 Theatre Arts Studio and Performance

03.04 01 01 Acting
03.04 01 02 Directing

NOTE:—Combinations of subject matter in Arts, Visual and Performing should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

03.04 01 03 Playwriting
03.04 01 04 Technical Theatre and Design

03.04 02 Theatre Studies

03.04 02 01 Theatre Theory and Criticism
03.04 02 02 Theatre History
03.04 02 03 Dramatic Literature

03.04 03 Theatre in Education
03.04 99 Other Theatre Arts (Specify)

03.05 VISUAL ARTS

03.05 01 Visual Arts Studio and Production

03.05 01 01 Fine Arts
03.05 01 02 Crafts
03.05 01 03 Foundations of Visual Arts Design
03.05 01 04 Application of Visual Arts Design

03.05 02 Visual Arts Studies

03.05 02 01 Art History and Appreciation
03.05 02 02 Art Theory and Criticism

03.05 03 Visual Arts in Education
03.05 04 Art Restoration, Preservation, Exhibition, and Cataloging
03.05 99 Other Visual Arts (Specify)

03.06 RELATED ARTS

03.06 01 Related Arts Studio and Production

03.06 01 01 Multi-media Production
03.06 01 02 Music Theatre

03.06 02 Related Arts Studies

03.06 02 01 Humanities
03.06 02 02 Allied Arts
03.06 02 03 Ethnic Arts

03.06 03 Related Arts and Aesthetic Education
03.06 04 Related Arts Management and Administration
03.06 99 Other Related Arts (Specify)

03.07 ARTS THERAPY

03.07 01 Art Therapy
03.07 02 Dance Therapy
03.07 03 Drama Therapy
03.07 04 Music Therapy
03.07 99 Other Arts Therapy (Specify)

03.99 OTHER ARTS, VISUAL AND PERFORMING (SPECIFY)

04 BUSINESS

Subject matter that is a part of Distributive Education and Career Education Programs can be found in this area under Marketing. Also, selected subject matter in this classification is applicable to office occupations. Although the knowledge of Economics is an integral part of business, it is listed in the subject-matter area of Social Sciences and Social Studies and not here. The knowledge of the skills involved in many occupational programs is found in this area even though differences may exist in the form and substance of the subject matter as it is presented to students. This is particularly true for elements listed under Administrative and Office Services such as Typewriting. The use of additional dimensions, such as type of program, can help to differentiate the subject matter where it is necessary to do so.

NOTE:—Combinations of subject matter in Business should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

04.01 ACCOUNTING

04.01 01 Accounting Principles
04.01 02 Accounting Systems
04.01 03 Auditing
04.01 04 Bookkeeping
04.01 05 Controllership and Budgeting
04.01 06 Cost Accounting
04.01 07 Data Processing Accounting
04.01 08 General Accounting
04.01 09 Governmental and Institutional Accounting
04.01 10 Machine Bookkkeeping
04.01 11 Managerial Accounting
04.01 12 Payroll Accounting

04.01 12 01 Payroll Recordkeeping

04.01 13 Recordkeeping
04.01 14 Tax Accounting
04.01 99 Other Accounting (Specify)

04.02 ADMINISTRATIVE AND OFFICE SERVICES

04.02 01 Administrative Procedures

04.02 01 01 Administrative Office Procedures
04.02 01 02 Clerical Procedures
04.02 01 03 Secretarial Procedures

04.02 02 Office Machines
04.02 03 Records Management

04.02 03 01 Filing
04.02 03 02 Micrographics

04.02 04 Reprographics
04.02 05 Shorthand and Transcription
04.02 06 Specialized Secretarial Services

04.02 06 01 Bilingual Secretarial
04.02 06 02 Legal Secretarial
04.02 06 03 Medical Secretarial
04.02 06 04 Technical Secretarial

04.02 07 Typewriting
04.02 08 Word Processing
04.02 99 Other Administrative and Office Services (Specify)

04.03 BANKING AND FINANCE

04.03 01 Business and Corporate Finance
04.03 02 Consumer Finance
04.03 03 Credit and Collections
04.03 04 Financial Institutions
04.03 05 International Banking and Finance

04.03 06 Investments and Securities
04.03 07 Monetary and Fiscal Policy
04.03 08 Money and Banking
04.03 09 Mortgage Brokerage
04.03 10 Negotiable Instruments
04.03 11 Principles and Theory of Finance
04.03 12 Public Finance
04.03 13 Savings and Loan
04.03 14 Supervision and Regulation of Banking and Finance
04.03 99 Other Banking and Finance (Specify)

04.04 BUSINESS DATA SYSTEMS

04.05 ENTREPRENEURSHIP

04.05 01 Minority Enterprises
04.05 02 Private Ownership
04.05 02 01 Corporation
04.05 02 02 Partnership
04.05 02 03 Proprietorship
04.05 03 Public Ownership
04.05 03 01 Nonprofit Public Corporation
04.05 03 02 Profitmaking Public Corporation
04.05 99 Other Entrepreneurship (Specify)

04.06 INFORMATION COMMUNICATIONS

04.06 01 Business Communication
04.06 02 Business Communication Systems
04.06 03 Information Communication Systems
04.06 03 01 United States Postal System
04.06 03 02 Private Delivery Systems
04.06 03 03 Telecommunications Systems
04.06 04 Business Report Writing
04.06 99 Other Information Communications (Specify)

04.07 INSURANCE AND RISK MANAGEMENT

04.07 01 Actuarial Science
04.07 02 Casualty Insurance
04.07 03 Estate Planning
04.07 04 Fiduciary Trusts and Annuities
04.07 05 Accident and Health Insurance
04.07 06 Liability Insurance
04.07 07 Life Insurance
04.07 08 Principles of Insurance
04.07 09 Property Insurance
04.07 10 Risk Management
04.07 11 Group Security and Social Insurance
04.07 12 Personal Insurance
04.07 13 Insurance Law
04.07 14 Insurance Enterprise
04.07 99 Other Insurance and Risk Management (Specify)

04.08 INTERNATIONAL BUSINESS

04.09 MANAGEMENT

04.09 01 Business Policy
04.09 02 Management Applications
04.09 02 01 Administrative Management
04.09 02 02 Industrial Management
04.09 02 03 Institutional Management
04.09 02 04 Middle Management
04.09 02 05 Production Management
04.09 02 06 Small Business Management
04.09 02 07 Transportation Management
04.09 03 Organizational Development and Behavior
04.09 04 Principles and Theory of Management
04.09 05 Principles and Theory of Organization
04.09 99 Other Management (Specify)

04.10 MARKETING

04.10 01 General Marketing
04.10 02 Marketing Economics
04.10 03 Marketing Functions
04.10 03 01 Buying
04.10 03 02 Financing
04.10 03 03 Marketing Research
04.10 03 04 Risk
04.10 03 05 Selling, Promotion, and Advertising
04.10 03 06 Standardization and Grading
04.10 03 07 Storage
04.10 03 08 Transportation
04.10 04 Marketing Management
04.10 04 01 Place Management
04.10 04 02 Price Management
04.10 04 03 Product Management
04.10 04 04 Promotion Management
04.10 05 Marketing of Products
04.10 05 01 Agriculture Products
04.10 05 02 Consumer Products
04.10 05 03 Industrial Products
04.10 06 Marketing of Services
04.10 06 01 Business Services
04.10 06 02 Financial Services
04.10 06 03 Hospitality Services
04.10 06 04 Insurance Services
04.10 06 05 Personal Services
04.10 06 06 Real Estate Services
04.10 07 Organization of Marketing
04.10 07 01 International Marketing
04.10 07 02 Manufacturing and Production
04.10 07 03 Marketing Integration
04.10 07 04 Retailing
04.10 07 05 Wholesaling
04.10 99 Other Marketing (Specify)

04.11 PERSONNEL MANAGEMENT AND ADMINISTRATION

04.11 01 Compensation
04.11 02 Evaluation Techniques
04.11 03 Human Relations
04.11 04 Labor-Management Relations
04.11 04 01 Collective Bargaining
04.11 04 02 Contract Administration

04.11 05 Recruitment, Selection, and Separation
04.11 06 Supervision
04.11 07 Training and Development
04.11 08 Welfare and Safety
04.11 99 Other Personnel Management and Administration (Specify)

04.12 QUANTITATIVE METHODS

04.12 01 Business Research Methods
04.12 02 Management Science
04.12 03 Operations Research
04.12 99 Other Quantitative Methods (Specify)

04.13 REAL ESTATE

04.13 01 Appraisal and Valuation
04.13 02 Land Use Controls
04.13 03 Principles of Real Estate
04.13 04 Property Management
04.13 05 Real Estate Economics
04.13 06 Real Estate Finance
04.13 07 Real Estate Investments
04.13 08 Real Estate Law
04.13 09 Real Estate Practice
04.13 99 Other Real Estate (Specify)

04.99 OTHER BUSINESS (SPECIFY)

05 COMMUNICATION

Film as Communication in this subject-matter area is considered as a means of transmitting messages. In contrast, Film as Art in the area of Arts, Visual and Performing, is considered as an artistic medium. Journalism and Speech Communication are both found in this subject-matter area and not in the area of Language, Linguistics, and Literature with which they are closely related and often reported.

05.01 ADVERTISING

05.01 01 Advertising Evaluation
05.01 02 Advertising Media
05.01 03 Advertising Production
05.01 04 Copywriting
05.01 99 Other Advertising (Specify)

05.02 COMMUNICATION TECHNOLOGY

05.02 01 Communication Networking
05.02 02 Print Publication Technology
05.02 03 Satellite Communication
05.02 99 Other Communication Technology (Specify)

05.03 FILM AS COMMUNICATION (See 03.02 – Film as Art)

05.03 01 Film and Public Policy
05.03 02 Film in Education
05.03 03 Film Production
05.03 03 01 Acting in Film
05.03 03 02 Cinematography
05.03 03 03 Directing for Film
05.03 03 04 Editing for Film
05.03 03 05 Film Graphics
05.03 03 06 Film Sound
05.03 03 07 Production Management in Film
05.03 03 08 Writing for Film
05.03 04 History of Film as Communication
05.03 05 Theory and Criticism of Film as Communication
05.03 99 Other Film as Communication (Specify)

05.04 INNOVATIVE COMMUNICATION

05.04 01 Nonprint Media
05.04 02 Technical Communication
05.04 99 Other Innovative Communication (Specify)

05.05 INTERNATIONAL COMMUNICATION

05.05 01 International Negotiations
05.05 02 International Propaganda
05.05 99 Other International Communication (Specify)

05.06 JOURNALISM

05.06 01 Editorial Processes
05.06 02 Critical and Persuasive Writing
05.06 03 Electronic Journalism
05.06 04 Evaluative Writing
05.06 05 Feature and Indepth Writing
05.06 06 Journalism History
05.06 07 Journalism Laboratory
05.06 08 News Reporting and Writing
05.06 09 Photographic Journalism
05.06 99 Other Journalism (Specify)

05.07 PRINT MEDIA

05.08 PROFESSIONAL PRACTICES IN COMMUNICATION

05.09 PUBLIC RELATIONS

05.10 RADIO

05.10 01 Radio and Public Policy
05.10 02 Radio Production
05.10 03 Radio Programing
05.10 04 Writing for Radio
05.10 99 Other Radio (Specify)

05.11 SPEECH COMMUNICATION

05.11 01 Code Systems
05.11 02 Intercultural Communication
05.11 03 Interpersonal Communication
05.11 03 01 Conflict Management

NOTE:—Combinations of subject matter in Communication should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

05.11 04 Organizational Communication
05.11 05 Oral Interpretation

05.11 05 01 Aesthetics of Li[illegible]e in Performance
05.11 05 02 Criticism of Li[illegible]e in Performance
05.11 05 03 Group Perfo[illegible]
05.11 05 04 Oral Tradition

05.11 06 Pragmatic Communication

05.11 06 01 Argumentation
05.11 06 02 Debate and Forensics
05.11 06 03 Discussion and Conference
05.11 06 04 Parliamentary Procedure
05.11 06 05 Persuasion

05.11 07 Public Address
05.11 08 Rhetorical and Communication Theory

05.11 08 01 Rhetorical Criticism

05.11 09 Speech Communication Education

05.11 09 01 Communication Development
05.11 09 02 Oral Communication Skills
05.11 09 03 Instructional Communication

05.11 10 Speech and Hearing Science

05.11 10 01 Biological Aspects of Speech and Hearing
05.11 10 02 Phonological and Phonetic Aspects of Speech and Hearing
05.11 10 03 Physical Aspects of Speech and Hearing

05.11 99 Other Speech Communication (Specify)

05.12 SPECIAL COMMUNICATION

05.12 01 Braille
05.12 02 Manual Communication
05.12 03 Speech Reading
05.12 99 Other Special Communication (Specify)

05.13 TELEVISION

05.13 01 Community Television
05.13 02 Television and Public Policy
05.13 03 Writing for Television
05.13 04 Television Production
05.13 05 Television Programing
05.13 99 Other Television (Specify)

05.99 OTHER COMMUNICATION (SPECIFY)

06 COMPUTER SCIENCE AND DATA PROCESSING

Most of the mathematical logic upon which computer systems are based is included in the subject-matter area of Mathematical Sciences. Knowledge of the engineering design and construction of computing equipment is found in the category of Electrical Engineering and Technology within the subject-matter area of Engineering and Engineering Technology. Knowledge about the ways in which computers and data processing equipment are utilized can be classified under other subject-matter areas if the emphasis is on the application and not upon the computer or data processing system.

NOTE:—Combinations of subject matter in Computer Science and Data Processing should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

06.01 APPLICATIONS IN COMPUTER SCIENCE AND DATA PROCESSING

06.01 01 Artificial Intelligence
06.01 02 Computer Graphics
06.01 03 Instructional Applications
06.01 04 Pattern Recognition
06.01 99 Other Applications in Computer Science and Data Processing (Specify)

06.02 COMPUTER OPERATIONS AND OPERATIONS CONTROL

06.02 01 Computer Operation
06.02 02 Data Control
06.02 03 Data Entry
06.02 04 Records Management
06.02 05 Unit Record Operation
06.02 99 Other Computer Operations and Operations Control (Specify)

06.03 COMPUTER HARDWARE SYSTEMS

06.03 01 Computer Architecture
06.03 02 Networking
06.03 03 Processing Modes
06.03 99 Other Computer Hardware Systems (Specify)

06.04 COMPUTER HARDWARE

06.04 01 Central Processing Units
06.04 02 Communication Control Devices
06.04 03 Memory Hierarchies
06.04 04 Microprocessors
06.04 05 Peripheral Devices
06.04 06 Unit Record Equipment
06.04 99 Other Computer Hardware (Specify)

06.05 INFORMATION AND DATA BASE SYSTEMS

06.05 01 Data Base Specifications
06.05 02 Data Base Management Systems
06.05 03 Data Base Security
06.05 04 File Organization and Manipulation
06.05 05 Generalized Report Techniques
06.05 06 Information Retrieval and Search Techniques
06.05 07 Sequential and Random Access Methods
06.05 08 Relational Data Bases
06.05 99 Other Information and Data Base Systems (Specify)

06.06 NUMERICAL COMPUTATIONS

06.06 01 Computational Algorithms
06.06 02 Computational Error Analysis
06.06 03 Mathematical Software
06.06 99 Other Numerical Computations (Specify)

06.07	**PROGRAMING LANGUAGES**
06.07 01	Command Languages
06.07 02	Decision Tables Languages
06.07 03	List Processing Languages
06.07 04	Problem or Special Purpose Languages
06.07 05	Procedure Oriented Languages
06.07 06	Simulation Languages
06.07 07	Symbolic and Algebraic Manipulation Languages
06.07 08	Instructional Programing and Author Languages
06.07 99	Other Programing Languages (Specify)
06.08	**PROGRAMING SYSTEMS**
06.08 01	Assemblers
06.08 02	Compilers
06.08 03	Interpreters
06.08 04	Job Control Languages
06.08 05	Macrolanguages
06.08 06	Operating Systems
06.08 07	Performance Measurement and Evaluation
06.08 08	Systems Security
06.08 09	Virtual Memory Systems
06.08 99	Other Programing Systems (Specify)
06.09	**SOFTWARE METHODOLOGY**
06.09 01	Coding and Testing
06.09 02	Documentation and Documentation Standards
06.09 03	Programing Techniques
06.09 04	Systems Analysis
06.09 05	Systems Design
06.09 06	Time, Cost, and Feasibility Studies
06.09 99	Other Software Methodology (Specify)
06.10	**THEORY OF COMPUTATION**
06.10 01	Analysis of Algorithms
06.10 02	Computability and Decidability
06.10 03	Formal Languages
06.10 04	Proof of Program Correctness
06.10 05	Theory of Code Optimization
06.10 06	Theory of Automata
06.10 99	Other Theory of Computation (Specify)
06.11	**EDUCATIONAL, SOCIETAL, AND CULTURAL CONSIDERATIONS**
06.11 01	Computer Literacy
06.11 02	History of Computer Science and Data Processing
06.11 03	Basic Concepts of Computer Science
06.11 04	Basic Concepts of Data Processing
06.11 99	Other Educational, Societal, and Cultural Considerations (Specify)
06.99	**OTHER COMPUTER SCIENCE AND DATA PROCESSING (SPECIFY)**

07 EDUCATION

The subject matter in this area is concerned with the knowledge that is needed to teach and to otherwise carry out the process of education. Programs or other subject matter should not be reported from within this section. Only the knowledge that is needed to develop those programs or to teach the subject matter is presented here. The definitions in chapter 3 should be examined carefully to ensure proper coding of the basic units of instruction.

All of the existing elements within the subject-matter area of Education are detailed to the third order. Additional two-digit codes can be applied at the fourth order to identify a generalized level of instruction to which the subject matter may be directed. It is recommended that the following codes be used for this purpose:

41 – Elementary 42 – Secondary 43 – Postsecondary

An additional code – 44 – may be used at the fourth order to designate the focus of subject matter in Adult and Continuing Education.

07.01	**FOUNDATIONS OF EDUCATION**
07.01 01	Comparative Education
07.01 02	Educational Theory
07.01 03	Socioeconomic Foundations
07.01 99	Other Foundations of Education (Specify)
07.02	**EDUCATIONAL ADMINISTRATION**
07.02 01	Principles and Theories of Educational Administration
07.02 02	Educational Business Management
07.02 03	Educational Facilities and Materiel
07.02 04	Educational Finance
07.02 05	Educational Leadership and Management
07.02 06	Educational Organization and Governance
07.02 07	Educational Personnel and Staffing
07.02 08	Educational Planning
07.02 09	Student Personnel Administration
07.02 99	Other Educational Administration (Specify)
07.03	**SYSTEMS OF EDUCATION**
07.03 01	Preelementary Education Systems
07.03 02	Elementary Education Systems
07.03 03	Secondary Education Systems
07.03 04	Middle School Education Systems
07.03 05	Community and Junior College Education Systems
07.03 06	Vocational-Technical Education Systems
07.03 07	Higher Education Systems
07.03 08	Parochial Education Systems
07.03 09	Adult-Continuing Education Systems
07.03 99	Other Systems of Education (Specify)

NOTE:—Combinations of subject matter in Education should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

07.04	**CURRICULUM AND INSTRUCTION – GENERAL**
07.04 01	Principles and Theories of Curriculum and Instruction
07.04 02	Management and Supervision of Curriculum and Instruction
07.04 03	Teacher Training
07.04 04	Teacher Methods
07.04 99	Other Curriculum and Instruction – General (Specify)
07.05	**CURRICULUM AND INSTRUCTION – SUBJECT MATTER (Using the Structure of the Classification of Educational Subject Matter)**
07.05 01	Agriculture and Renewable Natural Resources
07.05 02	Architecture and Environmental Design
07.05 03	Arts, Visual and Performing
07.05 04	Business
07.05 05	Communication
07.05 06	Computer Science and Data Processing
07.05 07	Education
07.05 08	Engineering and Engineering Technology
07.05 09	Health Care and Health Sciences
07.05 10	Home Economics
07.05 11	Industrial Arts, Trades, and Technology
07.05 12	Language, Linguistics, and Literature
07.05 13	Law
07.05 14	Libraries and Museums
07.05 15	Life Sciences and Physical Sciences
07.05 16	Mathematical Sciences
07.05 17	Military Sciences
07.05 18	Philosophy, Religion, and Theology
07.05 19	Physical Education, Health Education, and Leisure
07.05 20	Psychology
07.05 21	Public Administration and Social Services
07.05 22	Social Sciences and Social Studies
07.05 99	Other Curriculum and Instruction – Subject Matter (Specify)
07.06	**CURRICULUM AND INSTRUCTION – PROGRAMS**
07.06 01	Agricultural Occupations
07.06 02	Career Education
07.06 03	Cooperative Education
07.06 04	Distributive Education
07.06 05	Health Occupations
07.06 06	Home Economics Occupations
07.06 07	Office Occupations
07.06 08	Technical Education
07.06 09	Trade and Industrial Occupations
07.06 10	Reading and Language Arts Programs
07.06 11	Bilingual Education Programs
07.06 12	Cocurricular Activities
07.06 13	Driver Education Programs
07.06 14	Industrial Arts Education Programs
07.06 99	Other Curriculum and Instruction – Programs (Specify)
07.07	**COUNSELING AND GUIDANCE**
07.07 01	Principles and Theories of Counseling and Guidance
07.07 02	Academic Counseling and Guidance
07.07 03	Career Information and Counseling
07.07 04	Clinical Experience
07.07 05	Counseling Services
07.07 06	Group Processes and Procedures
07.07 07	Organization and Administration of Counseling and Guidance
07.07 08	Professional Development
07.07 99	Other Counseling and Guidance (Specify)
07.08	**SPECIAL EDUCATION**
07.08 01	Early Education of the Handicapped
07.08 02	Emotionally Handicapped
07.08 03	Gifted and Talented
07.08 04	Hearing Handicapped
07.08 05	Learning Disabled
07.08 06	Mentally Handicapped
07.08 07	Multiple Handicapped
07.08 08	Physically Handicapped
07.08 09	Severely Handicapped
07.08 10	Socially Handicapped
07.08 11	Speech Handicapped
07.08 12	Visually Handicapped
07.08 99	Other Special Education (Specify)
07.09	**COMMUNITY SERVICE**
07.09 01	Communication and Dissemination
07.09 02	Community Relations
07.09 03	Community Facilities and Activities
07.09 99	Other Community Service (Specify)
07.10	**EDUCATIONAL DEVELOPMENT**
07.10 01	Experimentation and Innovation
07.10 02	Staff Development
07.10 99	Other Educational Development (Specify)
07.11	**EDUCATIONAL EVALUATION AND RESEARCH**
07.11 01	Design and Planning
07.11 02	Methodology
07.11 03	Principles and Theory of Evaluation and Research
07.11 99	Other Educational Evaluation and Research (Specify)
07.12	**EDUCATIONAL TECHNOLOGY AND MEDIA**
07.12 01	Computer Applications to Education
07.12 02	Instructional Systems Design
07.12 03	Educational Media and Material Production
07.12 04	Educational Media and Resource Centers
07.12 05	Television Applications to Education
07.12 99	Other Educational Technology and Media (Specify)

07.99 OTHER EDUCATION (SPECIFY)

08 ENGINEERING AND ENGINEERING TECHNOLOGY

Identical subject-matter elements can be used to identify the basic units of instruction in Engineering and in Engineering Technology. When recording or reporting data about the two, differentiations can be made by using the additional dimension of type of instructional program. The five elements listed and defined below may be applied uniformly throughout the Engineering and Engineering Technology structure to many second-order and third-order elements to obtain a greater degree of detail if needed by local educational agencies or institutions.

41 – Research and Development: The study of the techniques of seeking and applying new knowledge to solve simple and complex engineering problems.

42 – Design and Systems: The study of the techniques of analyzing and synthesizing the various elements in simple and complex engineering problems to provide optimal solutions using various criteria.

43 – Operations: The study of the techniques of producing, constructing, and maintaining products, processes, structures, and energy systems.

44 – Engineering Management: The study of the techniques of determining, implementing, and evaluating goals, policies, and criteria involving technical and personnel problems.

45 – Sales and Applications: The study of the techniques of analyzing client requirements for engineering products, services, and systems, estimating costs and services, and making recommendations regarding acquisition, operation, and maintenance.

The additional two digits should be added in the seventh and eighth positions as shown below:

08.02 00 41 Agricultural Engineering and Technology, Research and Development

The five elements can also be reported individually as subject-matter elements in Engineering and Engineering Technology as follows:

08.00 00 41 Research and Development
08.00 00 42 Design and Systems
08.00 00 43 Operations
08.00 00 44 Engineering Management
08.00 00 45 Sales and Applications

08.01 AEROSPACE AND AERONAUTICAL ENGINEERING AND TECHNOLOGY

08.01 01 Aerodynamics
08.01 02 Aeronautics
08.01 03 Astronautics
08.01 04 Air Frame Structures
08.01 05 Ground and Air Support
08.01 06 Vehicle Guidance
08.01 99 Other Aerospace and Aeronautical Engineering and Technology (Specify)

NOTE.–Combinations of subject matter in Engineering and Engineering Technology should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

08.02 AGRICULTURAL ENGINEERING AND TECHNOLOGY

08.02 01 Agricultural Energy and Power
08.02 02 Farm Machinery
08.02 03 Farm Structures
08.02 04 Food Processing Machinery
08.02 05 Soil and Water Resources
08.02 99 Other Agricultural Engineering and Technology (Specify)

08.03 ARCHITECTURAL ENGINEERING AND TECHNOLOGY

08.03 01 Building Construction
08.03 02 Building Equipment
08.03 99 Other Architectural Engineering and Technology (Specify)

08.04 AUTOMOTIVE ENGINEERING AND TECHNOLOGY

08.05 BIOENGINEERING AND TECHNOLOGY

08.05 01 Biochemistry (See 15.04 03 – Biochemistry)
08.05 02 Biomaterials
08.05 03 Biomechanics (See 19.02 01 – Biomechanics)
08.05 04 Biomedical Systems
08.05 05 Biophysics (See 15.07 03 – Biophysics)
08.05 99 Other Bioengineering and Technology (Specify)

08.06 CHEMICAL ENGINEERING AND TECHNOLOGY

08.06 01 Polymers
08.06 02 Process Control and Simulation
08.06 03 Thermodynamics and Kinetics
08.06 04 Unit Operations
08.06 05 Transport Phenomena
08.06 99 Other Chemical Engineering and Technology (Specify)

08.07 CIVIL ENGINEERING AND TECHNOLOGY

08.07 01 Construction Engineering
08.07 02 Highway Engineering
08.07 03 Hydrology (See 15.05 02 – Hydrology)
08.07 04 Materials of Construction
08.07 05 Sanitation Engineering
08.07 06 Soil Mechanics and Foundations
08.07 07 Structural Engineering
08.07 08 Transportation Engineering
08.07 99 Other Civil Engineering and Technology (Specify)

08.08 COMPUTER ENGINEERING AND TECHNOLOGY

08.09 ELECTRICAL ENGINEERING AND TECHNOLOGY

- 08.09 01 Electromechanical Circuits
- 08.09 02 Electromechanical Controls
- 08.09 03 Electronics
- 08.09 04 Fields and Waves
- 08.09 05 Electronic Information Theory
- 08.09 06 Electrical Instrumentation
- 08.09 07 Power and Energy
- 08.09 99 Other Electrical Engineering and Technology (Specify)

08.10 GRAPHICS AND DRAFTING FOR ENGINEERING AND TECHNOLOGY

08.11 ENGINEERING MECHANICS

- 08.11 01 Continuum Mechanics
- 08.11 02 Fluid Mechanics
- 08.11 03 Solid Mechanics
- 08.11 04 Statics and Dynamics
- 08.11 99 Other Engineering Mechanics (Specify)

08.12 ENGINEERING SCIENCE

08.13 ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

- 08.13 01 Air Pollution Control
- 08.13 02 Noise Pollution Control
- 08.13 03 Solid Waste Control
- 08.13 04 Water and Sewage Control
- 08.13 99 Other Environmental Engineering and Technology (Specify)

08.14 GEOLOGICAL ENGINEERING

08.15 INDUSTRIAL ENGINEERING AND TECHNOLOGY

- 08.15 01 Facilities Layout
- 08.15 02 Human Factors in Industry
- 08.15 03 Operations Research (See 04.12 03 – Operations Research)
- 08.15 04 Production Planning and Control
- 08.15 05 Quality Assurance
- 08.15 06 Work Measurement
- 08.15 99 Other Industrial Engineering and Technology (Specify)

08.16 INSTRUMENTATION ENGINEERING AND TECHNOLOGY

08.17 MANUFACTURING ENGINEERING AND TECHNOLOGY

- 08.17 01 Manufacturing Processes
- 08.17 02 Materials Handling
- 08.17 03 Packaging Engineering
- 08.17 04 Production Engineering
- 08.17 05 Tool Engineering
- 08.17 99 Other Manufacturing Engineering and Technology (Specify)

08.18 MARINE ENGINEERING AND NAVAL ARCHITECTURE

- 08.18 01 Marine Equipment
- 08.18 02 Navigation
- 08.18 03 Marine Propulsion
- 08.18 04 Ship Structures
- 08.18 05 Underwater Techniques
- 08.18 99 Other Marine Engineering and Naval Architecture (Specify)

08.19 MATERIALS ENGINEERING AND TECHNOLOGY

- 08.19 01 Ceramics Engineering and Technology
- 08.19 02 Metals Engineering and Technology
- 08.19 03 Paper and Pulp Engineering and Technology
- 08.19 04 Plastics Engineering and Technology
- 08.19 05 Textiles Engineering and Technology
- 08.19 99 Other Materials Engineering and Technology (Specify)

08.20 MECHANICAL ENGINEERING AND TECHNOLOGY

- 08.20 01 Air Conditioning, Heating, Ventilation, and Refrigeration Engineering
- 08.20 02 Automatic Control
- 08.20 03 Energy Conversion
- 08.20 04 Fluid Power
- 08.20 05 Manufacturing Processes
- 08.20 06 Mechanical Design
- 08.20 07 Power Engineering
- 08.20 08 Thermal and Fluid Sciences
- 08.20 99 Other Mechanical Engineering and Technology (Specify)

08.21 METALLURGICAL ENGINEERING AND TECHNOLOGY

- 08.21 01 Engineering Welding
- 08.21 02 Extraction Metallurgy
- 08.21 03 Metal Forming
- 08.21 04 Physical Metallurgy
- 08.21 99 Other Metallurgical Engineering and Technology (Specify)

08.22 MINING ENGINEERING AND TECHNOLOGY

- 08.22 01 Mineral Dressing
- 08.22 02 Mineral Exploration
- 08.22 03 Mineral Processing
- 08.22 99 Other Mining Engineering and Technology (Specify)

08.23 NUCLEAR ENGINEERING AND TECHNOLOGY

- 08.23 01 Fuel Separation and Reprocessing
- 08.23 02 Nuclear Instrumentation

08.23 03	Radiation Control
08.23 04	Radiation Damage
08.23 05	Reactor Engineering
08.23 06	Reactor Operation
08.23 99	Other Nuclear Engineering and Technology (Specify)

08.24 OCEAN ENGINEERING

08.25 PETROLEUM ENGINEERING

08.25 01	Petroleum Exploration
08.25 02	Petroleum Refining
08.25 99	Other Petroleum Engineering (Specify)

08.26 SURVEYING AND MAPPING

08.26 01	Land Surveying and Subdivision
08.26 02	Engineering and Construction Surveying
08.26 03	Geodesy and Geodetic Surveying
08.26 04	Photogrammetry and Topographic Surveying
08.26 05	Remote Sensing and Environmental Surveying
08.26 06	Cartography
08.26 99	Other Surveying and Mapping (Specify)

08.99 OTHER ENGINEERING AND ENGINEERING TECHNOLOGY (SPECIFY)

09 HEALTH CARE AND HEALTH SCIENCES

Under Basic Health Care Sciences are those elements of knowledge which come from the Biological Sciences, but whose emphasis is directed toward the care and treatment of humans and animals. General knowledge, not specific to the restoration or preservation of health, is included in the subject-matter area of Life Sciences and Physical Sciences. Where appropriate, cross-references are shown in this structure.

Clinical Health Sciences lists those elements of knowledge that are related to diseases, injuries, or deformities. The list is divided into five subjectively established categories: 1) knowledge related to body organs or localized parts of the body, 2) knowledge of disorders or general conditions of the body, 3) knowledge that is specific to an age group or type of patient, 4) knowledge of health care approaches that are not unique to areas of the body or type of patient, but focus instead on the treatment itself, and 5) knowledge of special purpose health care and health sciences. Gaps were left in the numbering sequence to accentuate the categories and to allow for the addition of future elements within categories.

Many of the elements in this subject-matter area can apply either to humans or animals. Additional dimensions as to type of program can be added that will differentiate between animal and human medicine.

NOTE:—Combinations of subject matter in Health Care and Health Sciences should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

09.01 BASIC HEALTH CARE SCIENCES

09.01 01	Health Care Anatomy
09.01 01 01	Dental Anatomy
09.01 01 02	Gross Anatomy
09.01 01 03	Microanatomy
09.01 01 04	Ocular Anatomy
09.01 02	Biochemistry (See 15.04 03 — Biochemistry)
09.01 03	Clinical Chemistry
09.01 04	Diagnostics
09.01 05	Embryology (See 15.03 05 — Embryology)
09.01 06	Epidemiology
09.01 07	Medical Genetics
09.01 08	Hematology
09.01 09	Histology (See 15.03 08 — Histology)
09.01 10	Dental Oral Hygiene
09.01 11	Medical Hygiene
09.01 12	Immunology
09.01 13	Infectious Diseases
09.01 14	Microbiology (See 15.03 11 — Microbiology)
09.01 14 01	Bacteriology (See 15.03 17 — Bacteriology)
09.01 14 02	Mycology (See 15.03 18 — Mycology)
09.01 14 03	Parasitology (See 15.03 13 — Parasitology)
09.01 14 04	Virology
09.01 15	Health Care Nutrition
09.01 16	Oral Biology
09.01 17	Pathology
09.01 17 01	Cytology
09.01 17 02	Neuropathology
09.01 17 03	Ocular Pathology
09.01 17 04	Oral Pathology
09.01 18	Pharmacology
09.01 19	Health Care Physiology
09.01 20	Radioassay
09.01 21	Radiobiology
09.01 22	Serology
09.01 23	Toxicology
09.01 99	Other Basic Health Care Sciences (Specify)

09.02 CLINICAL HEALTH SCIENCES

09.02 01	Cardiology
09.02 02	General Dentistry
09.02 03	Dental Materials
09.02 04	Endodontics
09.02 05	Occlusion
09.02 06	Operative Dentistry
09.02 07	Oral Diagnosis and Medicine
09.02 08	Orthodontics
09.02 09	Periodontology and Periodontics
09.02 10	Programmatic Pain Control
09.02 11	Prosthodontics
09.02 12	Dermatology
09.02 13	Endocrinology
09.02 14	Gastroenterology
09.02 15	Internal Medicine
09.02 16	Nephrology
09.02 17	Neurology
09.02 18	Ophthalmology
09.02 19	Optometry

09.02 20 Orthopedics
09.02 21 Otorhinolaryngology
09.02 22 Podiatry
09.02 23 Proctology
09.02 24 Psychiatry
09.02 25 Urology

09.02 31 Allergy
09.02 32 Oncology
09.02 33 Rheumatology

09.02 41 Geriodontics
09.02 42 Gerontology
09.02 43 Gynecology
09.02 44 Obstetrics
09.02 45 Pediatrics
09.02 46 Pedodontics and Pediatric Dentistry

09.02 51 Acupuncture
09.02 52 Anesthesiology
09.02 53 Health Care Assisting

09.02 53 01 Dental Assisting
09.02 53 02 Medical Assisting
09.02 53 03 Nursing Assisting
09.02 53 04 Veterinary Assisting

09.02 54 Chiropractic

09.02 54 01 Chiropractic Adjusting Techniques
09.02 54 02 Chiropractic Clinical Applications
09.02 54 03 Chiropractic Roentgenology

09.02 55 Nursing

09.02 55 01 Primary Nursing
09.02 55 02 Secondary Nursing
09.02 55 03 Tertiary Nursing

09.02 56 Osteopathy
09.02 57 Physiatry, Physical Medicine
09.02 58 Preventive Health Care

09.02 58 01 Preventive Dentistry
09.02 58 02 Preventive Medicine
09.02 58 03 Veterinary Preventive Medicine

09.02 59 Radiology
09.02 60 Surgery

09.02 60 01 Abdominal Surgery
09.02 60 02 Bronco-Esophagology
09.02 60 03 Burns Therapy
09.02 60 04 Cardiothoracic Surgery
09.02 60 05 Colon and Rectal Surgery
09.02 60 06 Hand Surgery
09.02 60 07 Head and Neck Surgery
09.02 60 08 Maxillo-Facial Prosthetics
09.02 60 09 Neurological Surgery
09.02 60 10 Operating Room Technology
09.02 60 11 Oral Surgery
09.02 60 12 Pediatric Surgery
09.02 60 13 Plastic Surgery
09.02 60 14 Thoracic Surgery
09.02 60 15 Urologic Surgery

09.02 71 Aerospace Medicine
09.02 72 Family Medicine
09.02 73 Forensics

09.02 73 01 Forensic Dentistry
09.02 73 02 Forensic Medicine
09.02 73 03 Forensic Psychiatry

09.02 74 Hospital Dentistry
09.02 75 Industrial Medicine
09.02 76 Nuclear Medicine
09.02 77 Tropical Medicine
09.02 99 Other Clinical Health Sciences (Specify)

09.03 REHABILITATION AND THERAPY

09.03 01 Audiology and Speech Pathology
09.03 02 Dietetics and Nutrition
09.03 03 Occupational Therapy
09.03 04 Orthotics
09.03 05 Physical Therapy
09.03 06 Prosthetics
09.03 07 Radiation Therapy
09.03 08 Recreation Therapy
09.03 09 Respiratory Therapy
09.03 10 Special Therapy
09.03 99 Other Rehabilitation and Therapy (Specify)

09.04 PHARMACEUTICAL SCIENCES

09.04 01 Biopharmaceutics
09.04 02 Drug Distribution Systems
09.04 03 Drug and Drug Abuse Information
09.04 04 Drug Regulation and Control
09.04 05 Industrial Pharmacy
09.04 06 Nuclear Pharmacy
09.04 07 Pharmaceutical Chemistry

09.04 07 01 Organic Pharmaceutical Chemistry
09.04 07 02 Analytical Pharmaceutical Chemistry

09.04 08 Pharmaceutics
09.04 09 Pharmacognosy
09.04 10 Pharmacokinetics
09.04 11 Pharmacy Practices and Management

09.04 11 01 Community Pharmacy
09.04 11 02 Institutional Pharmacy

09.04 12 Physical Pharmacy
09.04 99 Other Pharmaceutical Sciences (Specify)

09.05 EMERGENCY SERVICES

09.05 01 Cardiopulmonary Resuscitation
09.05 02 Emergency Extrication
09.05 03 Emergency Medical Communication
09.05 04 First Aid
09.05 99 Other Emergency Services (Specify)

09.06 HOSPITAL AND HEALTH CARE ADMINISTRATION

09.06 01 Hospital Organization and Management

09.06 01 01 Longterm Care Facilities
09.06 01 02 Patient Care Facilities

09.06 02 Health Care Delivery Systems
09.06 03 Health Organizations, Standards, and Evaluation
09.06 99 Other Hospital and Health Care Administration (Specify)

09.07 PUBLIC HEALTH

09.07 01 Biometry
09.07 02 Community Medicine
09.07 03 Environmental Health Administration
09.07 04 Human Ecology
09.07 05 Industrial Health Administration
09.07 06 Maternal and Child Health Administration
09.07 07 Mental Health Administration
09.07 08 Occupational Medicine
09.07 09 Physiological Hygiene
09.07 10 Public Health Administration
09.07 99 Other Public Health (Specify)

09.08 VETERINARY MEDICAL SCIENCES

09.08 01 Veterinary Animal Medicine

09.08 01 01 Aquatic Animal Medicine
09.08 01 02 Avian Animal Medicine
09.08 01 03 Bovine Animal Medicine
09.08 01 04 Canine Animal Medicine
09.08 01 05 Caprine Animal Medicine
09.08 01 06 Equine Animal Medicine
09.08 01 07 Feline Animal Medicine
09.08 01 08 Food Animal Medicine
09.08 01 09 Laboratory Animal Medicine
09.08 01 10 Ovine Animal Medicine
09.08 01 11 Zoo, Wildlife, and Exotic Animal Medicine

09.08 02 Veterinary Pathology
09.08 03 Veterinary Public Health
09.08 04 Veterinary Theriogenology
09.08 99 Other Veterinary Medical Sciences (Specify)

09.09 GENERAL PERSPECTIVES OF HEALTH CARE AND HEALTH SCIENCES

09.09 01 Health Planning
09.09 02 History of Health Care and Health Sciences
09.09 03 Professional Practices in Health Care and Health Sciences

09.09 03 01 Dental Professional Practices
09.09 03 02 Medical Professional Practices
09.09 03 03 Veterinary Professional Practices

09.09 04 Ethics and Jurisprudence in Health Care and Health Sciences
09.09 05 Clinical Practices in Health Care and Health Sciences

09.09 05 01 Dental Clinical Techniques
09.09 05 02 Medical Clinical Techniques
09.09 05 03 Veterinary Clinical Techniques

09.09 99 Other General Perspectives in Health Care and Health Sciences (Specify)

09.99 OTHER HEALTH CARE AND HEALTH SCIENCES (SPECIFY)

10 HOME ECONOMICS

Although closely related to the elements in other subject-matter areas, the content of Home Economics can be clearly differentiated by reading the definitions that are found in the next chapter. The use of the additional dimension of type of instructional program can also be used to clarify the substance of these elements.

10.01 CLOTHING AND TEXTILES

10.01 01 Clothing and Textile Maintenance
10.01 02 Clothing and Textile Merchandising
10.01 03 Clothing and Textile Selection
10.01 04 Clothing and Construction and Alterations
10.01 05 Clothing Design
10.01 06 Clothing Economics
10.01 07 Fashion Design
10.01 08 History of Clothing and Textiles
10.01 09 Sociopsychological Aspects of Clothing and Textiles
10.01 10 Textile Design
10.01 11 Textile Production

10.01 11 01 Textile Fibers
10.01 11 02 Textile Finishes

10.01 99 Other Clothing and Textiles (Specify)

10.02 CONSUMER EDUCATION

10.02 01 Consumer Choice
10.02 02 Consumer Economics
10.02 03 Consumer Problems
10.02 04 Consumer Resources
10.02 05 Consumer Rights and Responsibilities
10.02 06 Personal and Family Finance
10.02 07 Consumer Information
10.02 99 Other Consumer Education (Specify)

10.03 FOOD AND NUTRITION

10.03 01 Community Nutrition
10.03 02 Dietetics

10.03 02 01 Clinical Dietetics
10.03 02 02 Therapeutic Dietetics

10.03 03 Experimental Foods
10.03 04 Food Habits and Patterns
10.03 05 Food Production Technology
10.03 06 Food Regulations
10.03 07 Food Related Equipment
10.03 08 Food Selection
10.03 09 Food Service
10.03 10 Food Storage and Preservation
10.03 11 History of Food and Nutrition
10.03 12 Nutrition Education
10.03 13 Nutrition
10.03 14 Preparation of Food
10.03 99 Other Food and Nutrition (Specify)

10.04 HOME MANAGEMENT

10.04 01 Decisionmaking
10.04 02 Resource Management

NOTE:—Combinations of subject matter in Home Economics should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

10.04 03 Management of Work
10.04 04 Work Simplification
10.04 05 Special Needs
10.04 99 Other Home Management (Specify)

10.05 HOUSING

10.05 01 Home Furnishings
10.05 02 Home Maintenance and Repair
10.05 03 Home Planning and Interior Design
10.05 04 Household Equipment
10.05 99 Other Housing (Specify)

10.06 HUMAN DEVELOPMENT AND FAMILY STUDIES

10.06 01 Child Development
10.06 01 01 Care and Guidance of Children
10.06 01 02 Parent Education
10.06 01 03 Special Needs of Children
10.06 02 Family Development
10.06 02 01 Community Influences and Natural Resources
10.06 02 02 Family Crises
10.06 03 Gerontology
10.06 04 Personal Development
10.06 99 Other Human Development and Family Studies (Specify)

10.07 INSTITUTIONAL HOUSEKEEPING AND FOOD SERVICE MANAGEMENT

10.07 01 Housekeeping Management
10.07 02 Food Service Management
10.07 99 Other Institutional Housekeeping and Food Service Management (Specify)

10.99 OTHER HOME ECONOMICS (SPECIFY)

11 INDUSTRIAL ARTS, TRADES, AND TECHNOLOGY

The elements in this subject-matter area can be used to record or report data in two distinct ways. One would be to consider knowledge or understanding about the elements that are listed. The second would be to consider the knowledge and skills that are related to the techniques and methods that the elements represent. For example, the subject-matter element of Carpentry may be used to code a basic unit of instruction that is designed to teach people about the trade. In another unit of instruction, Carpentry may involve teaching a student how to become a carpenter. Much of the subject matter of Industrial Arts falls under the first approach. Knowledge of the Trades and Technology falls under the second. The additional dimension of type of instructional program can further serve to differentiate the two.

NOTE.—Combinations of subject matter in Industrial Arts, Trades, and Technology should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

Although there are many personal service trades, those that are included in this subject-matter area are those which are commonly taught in educational agencies and institutions.

11.01 CONSTRUCTION

11.01 01 Carpentry
11.01 02 Concrete
11.01 03 Drywall Installation
11.01 04 Electrical
11.01 05 Environmental Systems
11.01 06 Estimating
11.01 07 Glazing
11.01 08 Heavy Equipment
11.01 09 Ironworking
11.01 10 Landscaping
11.01 11 Masonry
11.01 12 Millwork
11.01 13 Painting and Decorating
11.01 14 Plastering and Lathing
11.01 15 Plumbing
11.01 16 Roofing
11.01 17 Sheetmetal
11.01 18 Site Surveying
11.01 19 Welding
11.01 99 Other Construction (Specify)

11.02 MANUFACTURING (PRODUCT GENERATION)

11.02 01 Ceramics
11.02 02 Foundry
11.02 03 Glass Products
11.02 04 Health Devices
11.02 05 Leather and Hide Processing
11.02 06 Metalworking
11.02 07 Needle Trades
11.02 08 Paper and Fabrication
11.02 09 Plastics
11.02 10 Product Development
11.02 11 Production Systems
11.02 12 Textile Production
11.02 13 Tool and Die
11.02 14 Wood Products
11.02 99 Other Manufacturing (Specify)

11.03 POWER SYSTEMS

11.03 01 Atomic Power
11.03 02 Chemical Power
11.03 03 Electrical Power
11.03 04 Mechanical Power
11.03 05 Radiant Power
11.03 06 Thermic Power
11.03 07 Power Mechanics
11.03 08 Power and Energy Sources
11.03 99 Other Power Systems (Specify)

11.04 PRODUCT SERVICE (MAINTENANCE)

11.04 0. Aircraft Maintenance
11.04 01 01 Air Frame
11.04 01 02 Aircraft Power Plant

11.04 02 Appliance Repair
11.04 03 Building Maintenance
11.04 04 Business Machine Maintenance and Repair
11.04 05 Custodial Services
11.04 06 Fabric Maintenance and Repair
11.04 07 Heating and Cooling Maintenance and Repair
11.04 08 Instrument Maintenance and Repair
11.04 09 Marine Repair
11.04 10 Millwrighting
11.04 11 Radio-Television Maintenance and Repair
11.04 12 Small Engine Repair
11.04 13 Vehicle Maintenance and Repair

11.04 13 01 Chassis Repair
11.04 13 02 Power and Drive Repair
11.04 13 03 Vehicle Specialties Repair

11.04 99 Other Product Service (Specify)

11.05 GRAPHIC ARTS

11.05 01 Bindery
11.05 02 Copy Preparation

11.05 02 01 Cold Type
11.05 02 02 Hot Type

11.05 03 Drawing

11.05 03 01 Drafting (Mechanics)
11.05 03 02 Illustration
11.05 03 03 Blueprinting

11.05 04 Photography
11.05 05 Printing

11.05 05 01 Gravure (Intaglio)
11.05 05 02 Letterpress
11.05 05 03 Offset Lithography
11.05 05 04 Stencil
11.05 05 05 Xerography

11.05 99 Other Graphic Arts (Specify)

11.06 TRANSPORTATION

11.06 01 Flight Operations
11.06 02 Ground Operations
11.06 03 Heavy Equipment Operations
11.06 04 Maritime Service
11.06 05 Recreational Vehicle Operations
11.06 99 Other Transportation (Specify)

11.07 PERSONAL SERVICE

11.07 01 Barbering
11.07 02 Cosmetology
11.07 03 Electrolysis
11.07 04 Esthetic Skin Care
11.07 05 Massage
11.07 06 Mortuary Science
11.07 99 Other Personal Service (Specify)

11.99 OTHER INDUSTRIAL ARTS, TRADES, AND TECHNOLOGY (SPECIFY)

12 LANGUAGE, LINGUISTICS, AND LITERATURE

This subject-matter area features an interlay structure which permits the recording and reporting of detailed data about several specific languages while using a condensed structure. In 12.03, The Study and Uses of the English Language, the interlay has been applied to all recognized subject-matter categories in English. The interlay can also be used with any of the languages that are listed from 12.04 through 12.27. The second two digits of the language element code should be inserted in the appropriate blank space for the study and use code as shown below:

12.18 05 Norwegian Structure and Grammar
12.10 10 Writing French
12.25 99 Other Study and Uses of Spanish

Subject matter in any language (12.04 through 12.27) which cannot be assigned to a specific element within the interlay should be assigned to the element 12.__99, Other Study and Uses of Language as was done with Spanish in the example above.

12.01 LINGUISTICS (DIACHRONIC AND SYNCHRONIC)

12.01 01 Applied Linguistics

12.01 01 01 Bilingualism
12.01 01 02 Computational Linguistics
12.01 01 03 Contrastive Linguistics
12.01 01 04 Language Error Analysis
12.01 01 05 Lexicography

12.01 02 History of Linguistics
12.01 03 Language Analysis

12.01 03 01 Lexicology
12.01 03 02 Morphology
12.01 03 03 Phonetics
12.01 03 04 Phonology
12.01 03 05 Semantics
12.01 03 06 Syntax (Grammars)

12.01 04 Language Universals
12.01 05 Linguistic Theories

12.01 05 01 Generative and Transformational Theories
12.01 05 02 Structural and Descriptive Theories
12.01 05 03 Traditional Grammatical Theories (Latinate)

12.01 06 Psycholinguistics
12.01 07 Sociolinguistics

12.01 07 01 Dialectology
12.01 07 02 Language Planning
12.01 07 03 Language Variation

12.01 99 Other Linguistics (Specify)

12.02 LITERARY STUDIES

12.02 01 Comparative Literature
12.02 02 Literary Aesthetics and Appreciation
12.02 03 Literary Bibliography
12.02 04 Literary Criticism

NOTE.—Combinations of subject matter in Language, Linguistics, and Literature should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

12.02 05 Literary Theories
12.02 99 Other Literary Studies (Specify)

12.03 THE STUDY AND USES OF THE ENGLISH LANGUAGE

12.03 01 Dialects of the English Language
12.03 02 History of the English Language
12.03 03 English Language and Civilization
12.03 04 English Language and Contemporary Culture
12.03 05 English Language Structure and Grammar
12.03 06 Listening Comprehension in English
12.03 07 English Language Literature

12.03 07 01 Literature in English by Author
12.03 07 02 Literature in English by Genre
12.03 07 03 Literature in English by Period
12.03 07 04 Literature in English by Place
12.03 07 05 Literature in English by Theme
12.03 07 06 Literature in English by Other Categories

12.03 08 Reading in the English Language

12.03 08 01 Beginning Reading in English
12.03 08 02 Developmental Reading in English
12.03 08 03 Reading Readiness in English
12.03 08 04 Remedial Reading in English

12.03 09 Speaking the English Language
12.03 10 Writing the English Language

12.03 10 01 English Language Composition
12.03 10 02 English Language Creative Writing
12.03 10 03 English Language Rhetoric and Style
12.03 10 04 English Language Technical Writing
12.03 10 05 English Language Writing Conventions and Usage

12.03 99 Other Study and Uses of the English Language (Specify)

12.04 AFRICAN LANGUAGES

12.05 ARABIC

12.05 41 Classical Arabic
12.05 42 Modern Standard Arabic

12.06 ARTIFICIAL LANGUAGES

12.07 CHINESE

12.08 DANISH

12.09 FINNISH

12.10 FRENCH

12.11 GERMAN

12.12 GREEK

12.12 41 Classical Greek
12.12 42 Modern Greek
12.12 43 New Testament Greek

12.13 HEBREW

12.13 41 Classical Hebrew
12.13 42 Modern Hebrew

12.14 ITALIAN

12.15 JAPANESE

12.16 LATIN

12.16 41 Classical Latin
12.16 42 Medieval Latin

12.17 NATIVE AMERICAN

12.18 NORWEGIAN

12.19 PORTUGUESE

12.20 RUSSIAN

12.21 SANSKRIT

12.22 SLAVIC LANGUAGES

12.23 SOUTH ASIAN LANGUAGES

12.24 SOUTHEAST ASIAN LANGUAGES

12.25 SPANISH

12.26 SWEDISH

12.27 YIDDISH

12.__ THE STUDY AND USES OF LANGUAGE* (INTERLAY)

12.__01 Dialects of a Language (Synchronic and Diachronic)
12.__02 History of a Language
12.__03 A Language and a Civilization
12.__04 Language and a Contemporary Culture
12.__05 Language Structure and Grammar
12.__06 Listening Comprehension in a Language
12.__07 Literature of a Language

12.__07 01 Literature by Author
12.__07 02 Literature by Genre
12.__07 03 Literature by Period
12.__07 04 Literature by Place
12.__07 05 Literature by Theme
12.__07 06 Literature by Other Categories

12.__08 Reading a Language

12.__08 01 Beginning Reading
12.__08 02 Developmental Reading

*The blank is used to code the appropriate language.

12.__08 03 Reading Readiness
12.__08 04 Remedial Reading

12.__09 Speaking a Language
12.__10 Writing a Language

12.__10 01 Composition
12.__10 02 Creative Writing
12.__10 03 Rhetoric and Style
12.__10 04 Technical Writing
12.__10 05 Writing Conventions and Usage

12.__99 Other Study and Uses of Language (Specify)

12.99 OTHER LANGUAGE, LINGUISTICS, AND LITERATURE (SPECIFY)

13 LAW

13.01 CIVIL AND ADMINISTRATIVE PROCEDURE

13.01 01 Administrative Law
13.01 02 Conflict of Laws
13.01 03 Evidence
13.01 04 Federal Courts
13.01 05 Remedies: Legal and Equitable
13.01 99 Other Civil and Administrative Procedure (Specify)

13.02 COMMERCIAL LAW

13.02 01 Law of Commercial Paper
13.02 02 Law of Contracts
13.02 03 Debtor-Creditor Relations Law
13.02 04 Government Contracts Law
13.02 05 Insurance Law
13.02 06 Sales-of-Goods Law
13.02 07 Law of Secured Transactions
13.02 99 Other Commercial Law (Specify)

13.03 CONSTITUTIONAL LAW

13.03 01 Church-State Relations
13.03 02 Civil Liberties
13.03 03 Federalism
13.03 04 Separation of Powers
13.03 99 Other Constitutional Law (Specify)

13.04 CRIMINAL LAW

13.04 01 Crimes
13.04 02 Criminal Procedure and Evidence
13.04 03 Juvenile Justice
13.04 04 Sentencing, Probation, and Parole
13.04 99 Other Criminal Law (Specify)

NOTE.—Combinations of subject matter in Law should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

13.05 GOVERNMENTAL REGULATION OF BUSINESS

13.05 01 Anti-Trust Law
13.05 02 Law of Regulated Industries
13.05 03 Securities Regulation Law
13.05 99 Other Governmental Regulation of Business (Specify)

13.06 INTERNATIONAL LAW

13.06 01 Public International Law
13.06 02 Private International Law
13.06 03 Law of International Organizations
13.06 99 Other International Law (Specify)

13.07 LAW OF BUSINESS AND OTHER ORGANIZATIONS

13.07 01 Agency Law
13.07 02 Law of Associations
13.07 03 Law of Corporations
13.07 04 Law of Partnerships
13.07 99 Other Law of Business Organizations (Specify)

13.08 PERSPECTIVES ON LAW

13.08 01 Comparative Law
13.08 02 Jurisprudence
13.08 03 Legal History
13.08 04 Foreign Legal Systems
13.08 05 Roman Law
13.08 06 Jewish Law
13.08 99 Other Perspectives on Law (Specify)

13.09 PROPERTY LAW

13.09 01 Law of Possession and Title
13.09 02 Transfer of Property Law
13.09 03 Landlord-Tenant Law
13.09 04 Community Property Law
13.09 05 Law of Real Estate Financing
13.09 06 Intellectual Property Law
13.09 07 Law of Wills and Estates
13.09 08 Law of Trusts and Trust Administration
13.09 99 Other Property Law (Specify)

13.10 REGULATION OF EMPLOYMENT RELATIONS

13.10 01 Employment Discrimination Laws
13.10 02 Fair Labor Standards
13.10 03 Retirement Benefits Law
13.10 04 Safety and Health Law
13.10 05 Law of Unionization and Collective Bargaining
13.10 99 Other Regulation of Employment Relations (Specify)

13.11 REGULATION OF THE ENVIRONMENT

13.11 01 Environmental Law
13.11 02 Law of Land Use Planning
13.11 99 Other Regulation of the Environment (Specify)

13.12	**TAXATION LAW**
13.12 01	Federal Estate and Gift Tax Law
13.12 02	Federal Income Tax Law
13.12 03	State and Local Taxation Laws
13.12 99	Other Taxation Law (Specify)
13.13	**TORTS**
13.13 01	Intentional Torts
13.13 02	Negligence
13.13 03	Strict Liability
13.13 04	Products Liability
13.13 05	Unfair Trade
13.13 06	Reputational Tort
13.13 99	Other Torts (Specify)
13.14	**LEGAL PROFESSION**
13.14 01	Professional Responsibility
13.14 02	Legal Ethics
13.14 03	Structure of the Legal Profession
13.14 99	Other Legal Profession (Specify)
13.15	**LEGAL SKILLS**
13.15 01	Case and Statutory Analysis
13.15 02	Legal Bibliography
13.15 03	Interviewing and Counseling
13.15 04	Drafting of Legal Instruments
13.15 05	Negotiation and Mediation
13.15 06	Advocacy
13.15 99	Other Legal Skills (Specify)
13.16	**DOMESTIC RELATIONS LAW**
13.17	**ADMIRALTY LAW**
13.18	**LAW OF STATE AND LOCAL GOVERNMENTS**
13.19	**PUBLIC WELFARE LAW**
13.99	**OTHER LAW (SPECIFY)**

14 LIBRARIES AND MUSEUMS

The elements in this subject-matter area represent the substance of knowledge that has been determined to be appropriate to Libraries and Museums.

14.01	**LIBRARY SCIENCE**
14.01 01	History of Libraries
14.01 02	History of Printing and Books
14.01 99	Other Library Science (Specify)

NOTE.—Combinations of subject matter in Libraries and Museums should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

14.02	**MUSEOLOGY**
14.03	**ADMINISTRATION OF LIBRARIES AND MUSEUMS**
14.03 01	Academic Library Administration
14.03 02	Art Gallery Administration
14.03 03	Library Administration
14.03 04	Multilibrary Systems Administration
14.03 05	Museum Administration
14.03 06	Public Library Administration
14.03 07	School Library and Media Center Administration
14.03 08	Special Library Administration
14.03 08 01	Art Library Administration
14.03 08 02	Business Library
14.03 08 03	Law Library Administration
14.03 08 04	Medical Library Administration
14.03 08 05	Music Library Administration
14.03 08 06	Science and Technology Library Administration
14.03 08 07	Theological Library Administration
14.03 09	Zoological Garden Administration
14.03 99	Other Administration of Libraries and Museums (Specify)
14.04	**COLLECTION MANAGEMENT**
14.04 01	Cataloging of Collections
14.04 02	Classification of Collections
14.04 03	Maintenance of Collections
14.04 04	Preservation of Collections
14.04 05	Registration and Documentation of Collections
14.04 06	Restoration of Collections
14.04 07	Security of Collections
14.04 08	Selection and Acquisition of Collections
14.04 09	Storage of Collections
14.04 10	Automated Collection Management Systems
14.04 99	Other Collection Management (Specify)
14.05	**EQUIPMENT FOR LIBRARIES AND MUSEUMS**
14.05 01	Audio Equipment
14.05 02	Video and Visual Equipment
14.05 99	Other Equipment for Libraries and Museums (Specify)
	FACILITIES FOR LIBRARIES AND MUSEUMS
	Environmental Requirements
	Space Requirements
	Other Facilities for Libraries and Museums (Specify)
14.07	**MATERIALS FOR LIBRARIES AND MUSEUMS**
14.07 01	Archives
14.07 02	Artifacts and Specimens
14.07 03	Bibliographies

14.07 04	Books
14.07 05	Documents
14.07 06	Journals
14.07 07	Manuscripts
14.07 08	Material Production
14.07 09	Nonprint Materials
14.07 99	Other Materials for Libraries and Museums (Specify)

14.08 LIBRARY AND MUSEUM SERVICES AND FUNCTIONS

14.08 01	Advisory Services
14.08 02	Library and Museum Exhibits
14.08 03	Public Education Services and Functions
14.08 04	Reference and Retrieval
14.08 05	Story Telling
14.08 99	Other Library and Museum Services and Functions (Specify)

14.09 LIBRARY AND MUSEUM USER GROUPS

14.09 01	Preschool Users
14.09 02	Children Users
14.09 03	Adolescent Users
14.09 04	Adult Users
14.09 05	Handicapped Users
14.09 06	Disadvantaged Users
14.09 07	Minority Users
14.09 08	Senior Citizen Users
14.09 09	Vocational-Technical Institute Users
14.09 10	Community and Junior College Users
14.09 11	College and University Users
14.09 12	Research Institute Users
14.09 99	Other Library and Museum User Groups (Specify)

14.99 OTHER LIBRARIES AND MUSEUMS (SPECIFY)

15 LIFE SCIENCES AND PHYSICAL SCIENCES

The arrangement of elements within the subject-matter category of Biology includes those which could be aggregated into Botany and Zoology as well. To have broken them out would have required another level of coding and two additional digits.

Many of the elements within Biology have been cross-referenced to identical titles in Health Care and Health Sciences. The related elements differ in that the subject matter of Health Care and Health Sciences emphasizes the restoration and preservation of health. Subject matter in Life Sciences and Physical Sciences is not as specific and can be related to a broad range of units of instruction.

NOTE:—Combinations of subject matter in Life Sciences and Physical Sciences should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

15.01 ASTRONOMY

15.01 01	Cosmology (See 18.06 01 — Cosmology)
15.01 02	Solar Astronomy
15.01 03	Stellar Astronomy
15.01 99	Other Astronomy (Specify)

15.02 ATMOSPHERIC SCIENCES

15.02 01	Climatology
15.02 02	Meteorology
15.02 99	Other Atmospheric Sciences (Specify)

15.03 BIOLOGY

15.03 01	Biological Behavior
15.03 02	Cell Biology
15.03 03	Developmental Biology
15.03 04	Ecology
15.03 05	Embryology (See 09.01 05 — Embryology)
15.03 06	Evolution
15.03 07	General Genetics
15.03 08	Histology (See 09.01 09 — Histology)
15.03 09	Limnology
15.03 10	Marine Biology
15.03 11	Microbiology (See 09.01 14 — Microbiology)
15.03 12	Molecular Biology
15.03 13	Parasitology (See 09.01 14 03 — Parasitology)
15.03 14	Radiobiology
15.03 15	Taxonomy and Systematics
15.03 16	General Botany
15.03 17	Bacteriology (See 09.01 14 01 — Bacteriology)
15.03 18	Mycology (See 09.01 14 02 — Mycology)
15.03 19	Phycology
15.03 20	Plant Genetics
15.03 21	Plant Pathology
15.03 22	Plant Physiology
15.03 23	General Zoology
15.03 24	Animal Anatomy
15.03 25	Animal Behavior
15.03 26	Animal Genetics
15.03 27	Entomology
15.03 28	Herpetology
15.03 29	Icthyology
15.03 30	Mammology
15.03 31	Ornithology
15.03 99	Other Biology (Specify)

15.04 CHEMISTRY

15.04 01	General Chemistry
15.04 02	Analytical Chemistry
15.04 03	Biochemistry (See 09.01 02 — Biochemistry)
15.04 04	Electrochemistry
15.04 05	Inorganic Chemistry
15.04 06	Macromolecular Chemistry
15.04 07	Nuclear Chemistry and Radiochemistry
15.04 08	Organic Chemistry
15.04 09	Physical Chemistry
15.04 10	Surface Chemistry
15.04 11	Specialized Areas of Chemistry
15.04 99	Other Chemistry (Specify)

15.05	**GEOLOGY**
15.05 01	Geomorphology
15.05 02	Hydrology (See 08.07 03 – Hydrology)
15.05 03	Mineralogy
15.05 04	Paleontology
15.05 05	Petrology
15.05 06	Seismology
15.05 99	Other Geology (Specify)
15.06	**OCEANOLOGY**
15.07	**PHYSICS**
15.07 01	Acoustics
15.07 02	Astrophysics
15.07 03	Biophysics (See 08.05 05 – Biophysics)
15.07 04	Electricity
15.07 05	Geophysics
15.07 06	Optics
15.07 07	Particle Physics
15.07 08	Quantum Physics
15.07 09	Solid State Physics
15.07 10	Physical Thermodynamics
15.07 99	Other Physics (Specify)
15.08	**GENERAL PHYSICAL SCIENCES**
15.08 01	Cryogenics
15.08 02	Metallurgy
15.08 03	Mechanics
15.08 04	Nuclear Science
15.08 99	Other General Physical Sciences (Specify)
15.09	**GENERAL EARTH-SPACE SCIENCE**
15.99	**OTHER LIFE SCIENCES AND PHYSICAL SCIENCES (SPECIFY)**

16 MATHEMATICAL SCIENCES

Every attempt was made to include in this subject-matter area all subject-matter elements that have their genesis in mathematics. Accordingly, the elements within Probability and Statistics, in particular, will be combined with several other elements in other subject-matter areas. Because the nature of the unit of instruction will remain concerned with the knowledge of the Mathematical Sciences, however, the recording and reporting of data will be characterized by codes from this subject-matter area.

16.01	**MATHEMATICS, GENERAL PERSPECTIVES**
16.01 01	Philosophy of Mathematics
16.01 02	History of Mathematics
16.01 03	Content of Mathematics
16.01 99	Other Mathematics, General Perspectives (Specify)
16.02	**LOGIC, SETS, AND FOUNDATIONS**
16.02 01	Intuitive Logic and Sets
16.02 02	Mathematical Logic
16.02 03	Finite Sets
16.02 04	Graph Theory
16.02 05	Combinatorics
16.02 06	Infinite Sets
16.02 99	Other Logic, Sets, and Foundations (Specify)
16.03	**ARITHMETIC AND ALGEBRA**
16.03 01	Arithmetic
16.03 02	Algebra
16.03 03	Number Theory
16.03 04	Algebraic Geometry
16.03 05	Algebraic Structures
16.03 06	Linear and Multilinear Algebra
16.03 07	Universal Algebra
16.03 08	Group Theory
16.03 99	Other Arithmetic and Algebra (Specify)
16.04	**CLASSICAL ANALYSIS**
16.04 01	Calculus
16.04 02	Real Analysis
16.04 03	Measure and Integration
16.04 04	Complex Analysis
16.04 05	Special Functions
16.04 06	Ordinary Differential Equations
16.04 07	Partial Differential Equations
16.04 08	Finite Differences and Functional Equations
16.04 09	Ergodic Theory
16.04 10	Fourier Series and Integrals
16.04 11	Integral Equations and Transforms
16.04 12	Calculus of Variations
16.04 99	Other Classical Analysis (Specify)
16.05	**FUNCTIONAL ANALYSIS**
16.05 01	Hilbert Spaces and Operators
16.05 02	Topological Vector Spaces
16.05 03	Abstract Harmonic Analysis
16.05 04	Topological Groups
16.05 05	Topological Algebras
16.05 06	Convexity
16.05 07	Distributions (Generalized Functions)
16.05 99	Other Functional Analysis (Specify)
16.06	**GEOMETRY AND TOPOLOGY**
16.06 01	Plane and Solid Geometry
16.06 02	Trigonometry
16.06 03	Analytic Geometry
16.06 04	Geometries
16.06 05	Convex Bodies
16.06 06	Differential Geometry
16.06 07	Manifolds and Cell Complexes

NOTE:—Combinations of subject matter in Mathematical Sciences should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

16.06 08 General Topology
16.06 09 Algebraic Topology
16.06 10 Global Analysis
16.06 11 Topological Dynamics
16.06 99 Other Geometry and Topology (Specify)

16.07 PROBABILITY

16.07 01 Finite Probability
16.07 02 Theory of Probability
16.07 03 Limit Theorems
16.07 04 Markov Processes
16.07 05 Stochastic Processes
16.07 06 Foundations of Probability
16.07 07 Monte Carlo Methods
16.07 99 Other Probability (Specify)

16.08 STATISTICS

16.08 01 Descriptive Statistics
16.08 02 Applied Statistics
16.08 03 Mathematical Statistics
16.08 04 Parametric Inference
16.08 05 Nonparametric Inference
16.08 06 Linear Models
16.08 07 Multivariate Analysis
16.08 08 Experimental Design
16.08 09 Sample Surveys
16.08 10 Decision Theory
16.08 11 Time Series Analysis
16.08 12 Reliability and Quality Control
16.08 99 Other Statistics (Specify)

16.09 NUMERICAL ANALYSIS AND APPROXIMATION THEORY

16.09 01 Numerical Analysis
16.09 01 01 Matrix Numerical Analysis
16.09 01 02 Numerical Integration
16.09 01 03 Error Analysis
16.09 02 Approximation Theory
16.09 02 01 Interpolation
16.09 99 Other Numerical Analysis and Approximation Theory (Specify)

16.10 CLASSICAL APPLIED MATHEMATICS (PHYSICAL SYSTEMS)

16.10 01 Mechanics of Particles and Systems
16.10 01 01 Statics in Rigid Bodies
16.10 01 02 Kinematics of Particles and Rigid Bodies
16.10 02 Mechanics of Solids
16.10 03 Fluid Mechanics
16.10 04 Optics and Electromagnetic Theory
16.10 05 Relativity
16.10 06 Quantum Mechanics
16.10 07 Statistical Mechanics
16.10 08 Classical Thermodynamics
16.10 09 Mathematical Astronomy, Astrophysics, and Cosmology
16.10 10 Mathematical Geophysics and Meteorology
16.10 99 Other Classical Applied Mathematics (Specify)

16.11 APPLICATIONS OF MATHEMATICS (GENERAL)

16.11 01 Mathematics of Business and Finance
16.11 02 Actuarial Mathematics
16.11 03 Mathematics of Economics
16.11 04 Game Theory
16.11 05 Mathematical Programing (Linear and Nonlinear)
16.11 06 Control Theory and Optimal Control
16.11 07 Mathematical and Statistical Biology
16.11 08 Mathematical and Statistical Psychology
16.11 09 Mathematical and Statistical Sociology
16.11 10 Communication Theory
16.11 10 01 Mathematical Information Theory
16.11 10 02 Cybernetics
16.11 11 Multivariate Data Analysis
16.11 99 Other Applications of Mathematics (Specify)

16.12 USER ORIENTED MATHEMATICS

16.12 01 Business Mathematics
16.12 02 Consumer Mathematics
16.12 99 Other User Oriented Mathematics (Specify)

16.99 OTHER MATHEMATICAL SCIENCES (SPECIFY)

17 MILITARY SCIENCES

17.01 MILITARY HISTORY

17.01 01 History of Warfare
17.01 02 American Military History
17.01 03 Aerospace History
17.01 04 Army History
17.01 05 Naval History
17.01 99 Other Military History (Specify)

17.02 MILITARY ORGANIZATION

17.02 01 Organization of the Air Force
17.02 02 Organization of the Army
17.02 03 Organization of the Marine Corps
17.02 04 Organization of the Navy
17.02 99 Other Military Organization (Specify)

17.03 MILITARY MANAGEMENT AND LEADERSHIP

17.04 NATIONAL SECURITY AND DEFENSE

NOTE:—Combinations of subject matter in Military Sciences should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

17.05 MILITARY LAW

17.06 INTERNATIONAL MILITARY SYSTEMS

17.07 MILITARY COMMUNICATIONS

17.08 FIELD TRAINING, CAMPS, AND CRUISES

17.09 DRILL, COMMANDS, AND CEREMONIES

17.10 WEAPONRY AND MARKSMANSHIP

17.11 MILITARY FIRST AID AND HEALTH EDUCATION

17.12 AIR FORCE

17.12 01 Military Aeronautics
17.12 02 Military Aerospace
17.12 03 Military Astronautics
17.12 99 Other Air Force (Specify)

17.13 ARMY

17.13 01 Military Tactics
17.13 02 Land Navigation and Map Reading
17.13 99 Other Army (Specify)

17.14 MARINE CORPS

17.15 NAVY

17.15 01 Maritime Heritage and Affairs
17.15 02 Navigation and Naval Operations
17.15 03 Seamanship
17.15 04 Naval Ship Systems
17.15 99 Other Navy (Specify)

17.99 OTHER MILITARY SCIENCES (SPECIFY)

18 PHILOSOPHY, RELIGION, AND THEOLOGY

18.01 AESTHETICS

18.01 01 Philosophy of Art
18.01 02 Philosophy of Creativity
18.01 03 Philosophy of Criticism
18.01 04 Philosophy in Literature
18.01 99 Other Aesthetics (Specify)

18.02 EPISTEMOLOGY

18.02 01 Philosophy of Psychology
18.02 02 Philosophy of Natural Science
18.02 03 Philosophy of Social Science
18.02 99 Other Epistemology (Specify)

NOTE:—Combinations of subject matter in Philosophy, Religion, and Theology should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

18.03 ETHICS

18.03 01 Personal Moralities
18.03 02 Social Ethics
18.03 03 Ethics of Professions
18.03 04 Metaethical Theories
18.03 99 Other Ethics (Specify)

18.04 HISTORY AND TRADITIONS OF PHILOSOPHY

18.04 01 Ancient Western Philosophy
18.04 02 Medieval Western Philosophy
18.04 03 Modern Western Philosophy
18.04 04 Contemporary Western Philosophy
18.04 05 Oriental Philosophy
18.04 06 African Philosophy
18.04 07 Jewish Philosophy
18.04 99 Other History of Philosophy (Specify)

18.05 LOGIC AND PHILOSOPHICAL METHODOLOGY

18.05 01 Informal Logic
18.05 02 Symbolic Logic
18.05 03 Metaphilosophy
18.05 04 Philosophy of Language
18.05 05 Philosophy of Mathematics
18.05 06 Theories of Value Criteria
18.05 99 Other Logic and Philosophical Methodology (Specify)

18.06 METAPHYSICS

18.06 01 Cosmology (See 15.01 01 — Cosmology)
18.06 02 Ontology
18.06 03 Existentialism
18.06 04 Phenomenology
18.06 05 Philosophical Anthropology
18.06 06 Philosophy of Action
18.06 07 Philosophy of Life
18.06 08 Philosophy of Mind
18.06 09 Philosophy of Religion
18.06 99 Other Metaphysics (Specify)

18.07 SOCIAL AND POLITICAL PHILOSOPHY

18.07 01 Philosophy of Social and Political Theories
18.07 02 Philosophy of Education
18.07 03 Philosophy of History
18.07 04 Philosophy of Law
18.07 05 Philosophy of Medicine
18.07 99 Other Social and Political Philosophy (Specify)

18.08 PHILOSOPHICAL FOUNDATIONS

18.09 SPECIFIC RELIGIONS

18.09 01 Buddhism

18.09 02	Christianity
18.09 02 01	Orthodoxy
18.09 02 02	Roman Catholicism
18.09 02 03	Protestantism
18.09 03	Hinduism
18.09 04	Islam
18.09 05	Judaism
18.09 06	Tribal Religions
18.09 99	Other Specific Religions (Specify)

18.10 PHENOMENOLOGY OF RELIGION

18.10 01	Anthropology of Religion
18.10 02	Comparative Religions
18.10 03	Psychology of Religion
18.10 04	Sociology of Religion
18.10 99	Other Phenomenology of Religion (Specify)

18.11 RELIGION AND HUMAN EXPERIENCE

18.11 01	Religion and Science
18.11 02	Religion and Personality Studies
18.11 03	Religion and Social Issues
18.11 04	Religion and Culture
18.11 99	Other Religion and Human Experience (Specify)

18.12 SACRED WRITINGS

18.12 01	Sacred Writings of the Jewish Faith
18.12 02	Sacred Writings of the Christian Faith
18.12 99	Other Sacred Writings (Specify)

18.13 HISTORICAL THEOLOGY

18.13 01	Ancient Near East Theology
18.13 02	Early Christian and Rabbinic Theology
18.13 03	Medieval Theology
18.13 04	Modern Theology
18.13 99	Other Historical Theology (Specify)

18.14 SYSTEMATIC THEOLOGY

18.14 01	God
18.14 02	Theological Anthropology
18.14 03	Mysticism
18.14 04	Ecclesiology
18.14 05	Sacramental Theology
18.14 06	Christology
18.14 07	Soteriology
18.14 08	Pneumatology
18.14 09	Eschatology
18.14 99	Other Systematic Theology (Specify)

18.15 MORAL AND ETHICAL STUDIES

18.15 01	Moral and Ethical Principles
18.15 02	Moral and Ethical Issues
18.15 99	Other Moral and Ethical Studies (Specify)

18.16 PASTORAL STUDIES

18.16 01	Homiletics
18.06 02	Pastoral Care and Counseling
18.16 03	Religious Education
18.16 04	Religious Social Action
18.16 05	Worship and Liturgy
18.16 06	Sacred Music
18.16 07	Church Administration and Leadership
18.16 08	Missiology
18.16 09	Ecclesiastical Law and Polity
18.16 99	Other Pastoral Studies (Specify)

18.99 OTHER PHILOSOPHY, RELIGION, AND THEOLOGY (SPECIFY)

19 PHYSICAL EDUCATION, HEALTH EDUCATION, AND LEISURE

Dance is listed both in Physical Education, Health Education, and Leisure and in Arts, Visual and Performing. As an art form, it is more concerned with aesthetics than with physical movement, although both factors are involved. In recording or reporting data about Dance, care should be taken to make clear distinctions as to which subject-matter area is represented.

Health Education deals with the knowledge that individuals use to maintain good health as members of society. Specific knowledge relating to the restoration and preservation of health is included in the subject-matter area of Health Care and Health Sciences.

19.01 PHYSICAL EDUCATION

19.01 01	Movement Education
19.01 02	Exercise
19.01 02 01	Training and Conditioning
19.01 02 02	Developmental Exercise
19.01 02 03	Therapeutic Exercise
19.01 02 04	Relaxation
19.01 03	Group Games, Contests, and Self-Testing Activities
19.01 04	History of Physical Education
19.01 05	Philosophy of Physical Education
19.01 06	Physical Education Administration
19.01 07	Physical Education Curriculum
19.01 08	Physical Education Instruction
19.01 09	Physical Education Supervision
19.01 10	Measurement and Evaluation in Physical Education
19.01 99	Other Physical Education (Specify)

19.02 KINESIOLOGY

19.02 01	Biomechanics (See 08.05 03 – Biomechanics)
19.02 02	Neuromuscular Anatomy

NOTE:—Combinations of subject matter in Physical Education, Health Education, and Leisure should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

19.02 03	Performance Physiology
19.02 03 01	Neuromuscular Physiology
19.02 03 02	Cardiorespiratory Physiology
19.02 04	Psychomotor Behavior
19.02 04 01	Motor Learning
19.02 04 02	Perceptual Motor Development
19.02 05	Sports Medicine
19.02 05 01	Athletic Facilities and Equipment
19.02 05 02	Athletic Training
19.02 05 03	Diagnostic Procedures
19.02 05 04	Erogenics
19.02 05 05	Exercise Prescriptions
19.02 05 06	Injury Prevention and Treatment
19.02 99	Other Kinesiology (Specify)

19.03	**SPORT**
19.03 01	Sport in Schools and Colleges
19.03 01 01	Athletics
19.03 01 02	Intramurals
19.03 02	Sport in Community Agencies
19.03 03	Sport History
19.03 04	Sport Sociology
19.03 05	Sport Philosophy
19.03 06	Sport Psychology
19.03 07	International and Comparative Sport
19.03 08	Administration of Sport
19.03 09	Evaluation of Sport
19.03 10	Supervision of Sport
19.03 11	Instruction and Coaching of Sport
19.03 12	Sport Activities
19.03 12 01	Aquatics
19.03 12 02	Team Sport
19.03 12 03	Self-Defense
19.03 12 04	Individual Sports
19.03 12 05	Dual Sports
19.03 12 06	Adventure and Challenge Sports
19.03 12 07	Gymnastics
19.03 99	Other Sport (Specify)

19.04	**DANCE (See 03.01 – Dance)**
19.04 01	Dance Choreography
19.04 02	Dance Notation
19.04 03	Dance Production
19.04 04	Dance Activities and Forms
19.04 05	Dance History
19.04 06	Dance Philosophy
19.04 99	Other Dance (Specify)

19.05	**HEALTH EDUCATION**
19.05 01	Drugs and Other Substances
19.05 02	Community Health Education
19.05 03	Consumer Health Education
19.05 04	Disease Prevention and Control
19.05 05	Environmental Health Education
19.05 06	Family Health Education
19.05 07	Mental Health Education
19.05 08	Nutrition Education
19.05 09	Personal Health Education
19.05 10	Physical Fitness
19.05 11	Safety Education
19.05 12	Sex Education
19.05 13	Administration of Health Education
19.05 14	Health Education Curriculum
19.05 15	Health Education Instruction
19.05 16	Supervision in Health Education
19.05 17	Measurement and Evaluation in Health Education
19.05 99	Other Health Education (Specify)

19.06	**DRIVER AND SAFETY EDUCATION**
19.06 01	Alcohol, Drugs, and Driving
19.06 02	Characteristics of Drivers
19.06 03	Development of Driving Judgment
19.06 04	Behind-the-Wheel Driving Skills
19.06 05	Motor Bikes and Bicycles
19.06 06	Motor Vehicles and Engineering
19.06 07	Simulation Driving Experience
19.06 08	Student Patrol
19.06 09	Traffic Accidents
19.06 10	Traffic Citizenship
19.06 10 01	Passenger Safety
19.06 10 02	Pedestrian Safety
19.06 11	Traffic Laws and Ordinances
19.06 99	Other Driver Education (Specify)

19.07	**LEISURE STUDIES**
19.07 01	Resource Management in Leisure Studies
19.07 02	Populations and Leisure Services
19.07 03	Leisure and Recreation Planning
19.07 04	Leadership in Leisure Studies
19.07 05	Recreation Activities
19.07 05 01	Arts and Crafts
19.07 05 02	Dramatics
19.07 05 03	Social Recreation
19.07 05 04	Recreational Sports and Physical Activities
19.07 06	History of Leisure Studies
19.07 07	Philosophy of Leisure Studies
19.07 08	Sociology of Leisure Studies
19.07 09	International and Comparative Leisure Studies
19.07 99	Other Leisure Studies (Specify)

19.99	**OTHER PHYSICAL EDUCATION, HEALTH EDUCATION, AND LEISURE (SPECIFY)**

20 PSYCHOLOGY

20.01	**FOUNDATIONS OF PSYCHOLOGY**
20.01 01	Ethical Principles of Psychology
20.01 02	Historical Perspectives of Psychology

NOTE:—Combinations of subject matter in Psychology should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

20.01 03 Systems of Psychology
20.01 04 Theories in Psychology
20.01 99 Other Foundations of Psychology (Specify)

20.02 BIOPSYCHOLOGY

20.02 01 Behavioral Genetics
20.02 02 Comparative Psychology: Evolution of Behavior
20.02 03 Biochemistry of Behavior
20.02 03 01 Psychopharmacology
20.02 04 Physiological Psychology
20.02 04 01 Neuropsychology
20.02 04 02 Sensory Psychophysiology
20.02 04 03 Psychophysiology and Biofeedback
20.02 99 Other Biopsychology (Specify)

20.03 ENVIRONMENTAL PSYCHOLOGY

20.03 01 Architectural Psychology
20.03 02 Spatial Behavior
20.03 99 Other Environmental Psychology (Specify)

20.04 EXPERIMENTAL PSYCHOLOGY

20.04 01 Behavior Analysis
20.04 02 Decisionmaking
20.04 03 Human Information Processing
20.04 04 Motivation
20.04 05 Psycholinguistics
20.04 06 Psychology of Learning
20.04 06 01 Learning, Conditioning
20.04 06 02 Retention and Recall
20.04 06 03 Programed Learning, PSI
20.04 07 Psychology of Sensory Processes and Perception
20.04 08 Psychology of Thinking and Problem Solving
20.04 99 Other Experimental Psychology (Specify)

20.05 PSYCHOLOGY OF THE INDIVIDUAL

20.05 01 Abnormal Psychology
20.05 02 Career Development
20.05 03 Clinical Psychology
20.05 03 01 Behavior Modification
20.05 03 02 Crisis Intervention
20.05 03 03 Assessment
20.05 03 04 Psychotherapeutic Method
20.05 04 Developmental Psychology
20.05 04 01 Psychology of Age Groupings (Child, Adult, Aged)
20.05 05 Psychology of Adjustment
20.05 06 Psychology of Death
20.05 07 Psychology of Disadvantaged Persons (Culturally or Physically Handicapped)
20.05 07 01 Exceptional Development
20.05 08 Psychology of Identifiable Sets (Women, Blacks, Others)
20.05 09 Psychology of Personality
20.05 99 Other Psychology of the Individual (Specify)

20.06 PSYCHOMETRICS

20.06 01 Differential Psychology
20.06 02 Psychological Assessment
20.06 03 Psychological Testing
20.06 04 Survey Techniques
20.06 99 Other Psychometrics (Specify)

20.07 SOCIAL PSYCHOLOGY

20.07 01 Attitudes
20.07 02 Group Processes
20.07 03 Organizational Psychology
20.07 99 Other Social Psychology (Specify)

20.08 PSYCHOLOGICAL PROGRAMS (APPLIED AND PROFESSIONAL)

20.08 01 Community Psychology
20.08 02 Counseling Psychology
20.08 03 Consulting Psychology
20.08 04 Educational Psychology
20.08 05 School Psychology
20.08 05 01 Academic Remediation
20.08 05 02 Behavior Management
20.08 99 Other Psychological Programs (Specify)

20.09 PSYCHOLOGY IN ECONOMICS, INDUSTRY, AND GOVERNMENT

20.09 01 Industrial Psychology
20.09 02 Personnel Psychology
20.09 03 Military Psychology
20.09 04 Organizational Psychology
20.09 05 Consumer Psychology
20.09 06 Human Engineering
20.09 06 01 Man-Machine Systems
20.09 06 02 Work Environments
20.09 06 03 Work Performance
20.09 07 Program Evaluation
20.09 99 Other Psychology in Economics, Industry, and Government (Specify)

20.99 OTHER PSYCHOLOGY (SPECIFY)

21 PUBLIC ADMINISTRATION AND SOCIAL SERVICES

21.01 PUBLIC ADMINISTRATION

21.01 01 Administrative Theory
21.01 02 Organizational Theory and Behavior

NOTE:—Combinations of subject matter in Public Administration and Social Services should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

21.01 03 Administrative Management

21.01 03 01 Administration of Public Buildings and Lands
21.01 03 02 Personnel and Labor Relations in Government
21.01 03 03 Financial Administration
21.01 03 04 Information Systems

21.01 04 Regulatory Administration
21.01 05 Comparative Public Administration
21.01 06 International Administration
21.01 07 Legislative Administration
21.01 08 Court Administration
21.01 09 Professional Practices in Public Administration
21.01 10 Public Policy and Science and Technology
21.01 11 Public Policy and Natural Resources and Environment
21.01 12 Policy Sciences
21.01 13 Public Policy Analysis and Evaluation
21.01 14 Quantitative and Nonquantitative Analysis in Public Administration
21.01 99 Other Public Administration (Specify)

21.02 PUBLIC WORKS

21.02 01 Public Transportation

21.02 01 01 Public Mass Transit
21.02 01 02 Public Streets and Highways
21.02 01 03 Public Ports, Harbors, and Terminals

21.02 02 Public Sanitation
21.02 03 Management of Public Facilities and Buildings
21.02 04 Public Utilities
21.02 99 Other Public Works (Specify)

21.03 SAFETY AND CORRECTIONAL SERVICES

21.03 01 Correctional Services

21.03 01 01 Organization and Administration of Correctional Services
21.03 01 02 Correctional Techniques and Procedures
21.03 01 03 Parole and Probation
21.03 01 04 Penology

21.03 02 Fire Protection
21.03 03 Industrial and Occupational Safety Services
21.03 04 Law Enforcement

21.03 04 01 Criminal Investigation and Evidence
21.03 04 02 Law Enforcement Technology
21.03 04 03 Organization and Administration of Law Enforcement
21.03 04 04 Police Management
21.03 04 05 Police Problems
21.03 04 06 Police Procedures and Tactics

21.03 05 Protective Services
21.03 99 Other Safety and Correctional Services (Specify)

21.04 SOCIAL WORK

21.04 01 Social Welfare

21.04 01 01 History of Social Welfare
21.04 01 02 Philosophy of Social Welfare
21.04 01 03 Organization of Social Welfare Services
21.04 01 04 Social Welfare Policy Formulation

21.04 02 Social Work Practice

21.04 02 01 History and Philosophy of Social Work
21.04 02 02 Organization and Administration of Social Work
21.04 02 03 Social Work Research and Evaluation
21.04 02 04 Professional Practices in Social Work
21.04 02 05 Public and Private Social Work Practice
21.04 02 06 Social Work and Other Subject Matter

21.04 03 Social Work Methods

21.04 03 01 Social Case Work
21.04 03 02 Social Group Work
21.04 03 03 Community Organization and Development
21.04 03 04 Prevention of Social Problems
21.04 03 05 Social Work Consultation
21.04 03 06 Social Work Supervision

21.04 04 Fields of Social Work

21.04 04 01 Social Work of Age Groupings
21.04 04 02 Social Work of Identifiable Sets of People
21.04 04 03 Social Work of Social Environments
21.04 04 04 Social Work in Occupational Settings
21.04 04 05 Social Work and Health Care
21.04 04 06 Multiple Fields of Social Work

21.04 05 Social Environments and Human Behavior

21.04 05 01 Human Development
21.04 05 02 Deviant Behavior
21.04 05 03 Family Dynamics and Relationships
21.04 05 04 Social Impact of Institutions
21.04 05 05 Physical and Mental Illness
21.04 05 06 Social Impact of Environments
21.04 05 07 Social Problems

21.04 99 Other Social Work (Specify)

21.05 PUBLIC RECREATION

21.05 01 Recreational Environments
21.05 02 Community Recreation
21.05 03 Public Recreation Administration
21.05 99 Other Public Recreation (Specify)

21.99 OTHER PUBLIC ADMINISTRATION AND SOCIAL SERVICES (SPECIFY)

22 SOCIAL SCIENCES AND SOCIAL STUDIES

Although the nature of the subject matter in Social Sciences may differ from that in Social Studies, the same subject-matter elements can be used in data recording and reporting activities. If distinctions need to be made, they can be accomplished through the use of program descriptions or other educational dimensions.

22.01 ANTHROPOLOGY

22.01 01 Archaeology

22.01 01 01 Ethnoarchaeology
22.01 01 02 Environmental Archaeology
22.01 01 03 Regional Archaeology

NOTE:—Combinations of subject matter in Social Sciences and Social Studies should be identified as multiple subject matter and should be coded, recorded, and reported according to the directions given in appendix E.

22.01 02 Cultural Anthropology
22.01 03 Ethnography
22.01 04 Ethnology
22.01 05 Linguistics in Anthropology
22.01 06 Physical Anthropology
22.01 07 Social Anthropology
22.01 08 Research Methodology
22.01 08 01 Field Methodology
22.01 08 02 Laboratory Techniques
22.01 09 Topical Anthropology
22.01 99 Other Anthropology (Specify)

22.02 ECONOMICS

22.02 01 Principles and Theory of Economics
22.02 01 01 Macroeconomic Theory
22.02 01 02 Microeconomic Theory
22.02 02 History of Economics
22.02 03 Economic Policy
22.02 04 Monetary and Fiscal Theory and Institutions
22.02 05 National Income
22.02 06 Public Finance
22.02 07 Economic Growth and Development
22.02 08 Consumer Economics
22.02 09 Comparative Economic Systems
22.02 10 Economics of Human Resources
22.02 11 Labor and Manpower Economics
22.02 12 Economics of Natural Resources
22.02 13 Business and Industrial Economics
22.02 13 01 Industrial Organization
22.02 13 02 Industry Studies
22.02 13 03 Economics of Industrial Change
22.02 14 International Economics
22.02 14 01 International Finance
22.02 14 02 International Trade
22.02 15 Social Economics
22.02 16 Urban and Rural Economics
22.02 17 Quantitative Economics
22.02 17 01 Econometrics
22.02 17 02 Economic Forecasting
22.02 99 Other Economics (Specify)

22.03 GEOGRAPHY

22.03 01 Cultural Geography
22.03 01 01 Political Geography
22.03 01 02 Social Geography
22.03 02 Economic Geography
22.03 02 01 Agricultural Environments
22.03 02 02 Industrial Environments
22.03 02 03 Locational Analysis
22.03 03 Historical Geography
22.03 04 Geographic Research Methods and Techniques
22.03 04 01 Cartography
22.03 04 02 Geographic Field Methods
22.03 04 03 Remote Sensing
22.03 05 Physical Geography
22.03 05 01 Biogeography
22.03 05 02 Geomorphology
22.03 05 03 Oceanography
22.03 05 04 Soils Geography
22.03 06 Regional Geography
22.03 06 01 Specialized Regional Environments
22.03 06 02 Specialized Regional Land Masses
22.03 06 03 Specialized Regional Political States
22.03 07 Transportation Geography
22.03 08 Urban Geography
22.03 99 Other Geography (Specify)

22.04 HISTORY – THEMATIC, AREA, PERIOD, AND PERSON

22.04 01 Constitutional and Administrative History
22.04 02 Diplomatic History
22.04 03 Economic History
22.04 04 Historiography
22.04 05 History of Science
22.04 06 Intellectual and Cultural History
22.04 07 Political History
22.04 08 Religious History
22.04 09 Social History
22.04 20 African History
22.04 21 American Colonial History
22.04 22 Antarctic History
22.04 23 Asian History
22.04 24 British History
22.04 25 Canadian History
22.04 26 European History
22.04 27 Latin American History
22.04 28 Local and State History
22.04 29 Mediterranean History
22.04 30 Oceanian History
22.04 31 Russian History
22.04 32 United States History
22.04 33 World History
22.04 50 Ancient History
22.04 51 Contemporary History
22.04 52 Medieval History
22.04 53 Modern History
22.04 70 Minority Group History
22.04 71 Native American History
22.04 72 History of Women
22.04 99 Other History – Thematic, Area, Period, and Person (Specify)

22.05 POLITICAL SCIENCE AND GOVERNMENT

22.05 01 American Government
22.05 02 Citizenship
22.05 03 Comparative Political Systems
22.05 03 01 African Political Systems
22.05 03 02 Asian Political Systems

22.05 03 03 Communist Political Systems
22.05 03 04 Latin American Political Systems
22.05 03 05 Middle Eastern Political Systems
22.05 03 06 Western European Political Systems

22.05 04 Contemporary World Affairs
22.05 05 International Relations

22.05 05 01 American Foreign Policy
22.05 05 02 Comparative Foreign Policy
22.05 05 03 Foreign Policy Formulation
22.05 05 04 International Organizations

22.05 06 Political Behavior
22.05 07 Political Parties and Public Opinion
22.05 08 Political Socialization
22.05 09 Political Structures
22.05 10 Political Theory

22.05 10 01 American Political Theory
22.05 10 02 Communism
22.05 10 03 Ethics and Politics
22.05 10 04 Political Ideology

22.05 11 State and Local Government
22.05 99 Other Political Science and Government (Specify)

22.06 SOCIOLOGY

22.06 01 Community Sociology
22.06 02 Criminology
22.06 03 Demography and Human Ecology

22.06 03 01 Population Change
22.06 03 02 Population Problems
22.06 03 03 Population Theory

22.06 04 Juvenile Delinquency

22.06 05 Marriage and Family

22.06 05 01 Marriage and Family Counseling
22.06 05 02 Sociology of Marriage
22.06 05 03 Sociology of Family

22.06 06 Principles and Theory of Sociology

22.06 06 01 Comparative Sociology
22.06 06 02 History and Development of Sociology
22.06 06 03 Theory of Social Conflict
22.06 06 04 Theory of Social Structures

22.06 07 Psychological Sociology

22.06 07 01 Collective Behavior
22.06 07 02 Socialization

22.06 08 Rural Sociology
22.06 09 Quantitative Methods
22.06 10 Social Control and Deviance
22.06 11 Social Institutions
22.06 12 Social Organization and Change

22.06 12 01 Social Stratification
22.06 12 02 Futuristics
22.06 12 03 Social Structure
22.06 12 04 Social Movements

22.06 13 Social Problems
22.06 14 Urban Sociology
22.06 15 Sociology of Groups

22.06 15 01 Black Studies
22.06 15 02 Race and Minority Group Relations
22.06 15 03 Women Studies
22.06 15 04 Small Groups

22.06 99 Other Sociology (Specify)

22.99 OTHER SOCIAL SCIENCES AND SOCIAL STUDIES (SPECIFY)

CHAPTER 3
DEFINITIONS OF EDUCATIONAL SUBJECT MATTER

This chapter contains definitions for the elements that are contained in the Classification of Educational Subject Matter. The definitions are arranged in the same subject-matter areas found in the previous chapter. Combinations of subject matter should be identified as multiple subject matter and coded, recorded, and reported according to the directions given in appendix E.

01 AGRICULTURE AND RENEWABLE NATURAL RESOURCES

Subject matter concerned with the production of food and fiber, and the conservation and development of the resources of arable and nonarable land, forests, soil, wildlife, ranges, fisheries, water, and outdoor recreation.

01.01 AGRICULTURAL ECONOMICS

The study of the transformation of limited agricultural resources, products, and services, and their influence upon prices, world trade, the economy, land values, multinational corporations, and the effect of these factors upon agriculture.

01.01 01 Agricultural Appraisal

The study of methods and techniques for determining the value of agricultural property.

01.01 02 Agricultural Credit and Finance

The study of the factors, sources, and policies that are applied to the control of the financial aspects of operating and managing an agricultural enterprise.

01.01 03 Agricultural Marketing

The study of the various marketing functions involved with the sale, processing, and distribution of agricultural products, including the study of commodity and terminal markets, cooperatives, and futures trading.

01.01 04 Agricultural Organizations

The study of current national, regional, State, and local agricultural organizations including their development and purposes.

01.01 05 Agricultural Supplies

The study of the use of supplies, materials, and services in the production phase of agriculture, and the development and use of managerial tools for control and analysis.

01.01 06 Economic Development and International Trade

The study of the nature and effect of policies, processes, and trends of agricultural marketing upon national and world markets.

01.01 07 Farm and Ranch Management

The study of the techniques of farm and ranch management including resource analysis, accounting, production, financing, resource acquisition, purchasing, performance records, contracts, and marketing to obtain optimum returns.

01.01 08 Public Policy and Agriculture

The study of the relationship, impact, and administration of government policies within the agricultural community.

01.01 99 Other Agricultural Economics (Specify)

01.02 AGRICULTURAL ENGINEERING (See 08 — Engineering and Engineering Technology)

01.03 AGRICULTURAL TECHNOLOGY

The study of the application of scientific and engineering knowledge and methods, and technical skills and abilities to the needs of agricultural enterprises.

01.03 01 Agricultural Design, Construction, and Maintenance

The study of skills and abilities involved in the planning, layout, fabrication, and maintenance of agricultural equipment and facilities.

01.03 02 Agricultural Electrification

The study of techniques and procedures for making effective use of electricity and electrical equipment on farms,

ranches, and other agricultural establishments, including the principles of electricity, maintenance and operation of equipment, and safety factors related to electrification.

01.03 03 Agricultural Materials Handling

The study of the methods and techniques for handling by mechanical, electronic, or other means, materials used in agriculture enterprises.

01.03 04 Agricultural Mechanics

The study of the processes involved in the selection, operation, maintenance, and use of agricultural power, machinery, and equipment; soil and water management; and mechanics shops, including sales and services.

01.03 05 Agricultural Processing

The study of the principles and techniques for readying agricultural commodities for consumption.

01.03 06 Agricultural Storage

The study of the methods and technology for preserving and maintaining agricultural products through such means as refrigeration, packaging, drying, and chemical pressurization.

01.03 07 Agricultural Transportation

The study of the methods of moving agricultural products from one location to another, giving consideration to such things as economics and quality preservation.

01.03 08 Agricultural Waste Control

The study of the processes involved in constructing, using, maintaining, and controlling agricultural waste systems in compliance with established standards.

01.03 99 Other Agricultural Technology (Specify)

01.04 ANIMAL SCIENCES

The study of the theories, principles, and application of appropriate technical skills that apply to the production and management of animals and animal products.

01.04 01 Animal Anatomy and Physiology

The study of the anatomical structure, and body processes and functions that relate to agricultural animal production, such as lactation, reproduction (including artificial insemination and heat detection), egg production, digestion, growth, and wool production.

01.04 02 Animal or Animal Products Selection and Evaluation

The study of the principles involved in the selection of animals or animal products through the identification of desirable characteristics related to the production performance, anatomy, and quality of the meat, milk, eggs, or fiber produced.

01.04 03 Animal Diseases, Parasites, and Insects

The study of methods of identification of diseases, parasites, or insect infestations in agricultural animals, and the application of preventative and curative measures.

01.04 04 Animal Genetics and Reproduction

The study of the principles of inheritance and their applications for the improvement of agricultural animals through breeding and selection.

01.04 05 Animal Health and Care

The study of the environment, drugs, antibiotics, vaccinations, blood tests, and other management factors that affect the prevention and control of diseases in agricultural animals.

01.04 06 Animal Management and Production

The study of the relationship between animal husbandry and the products obtained from animal growth, plus the approved practices associated with these relationships such as dairy production, beef production, and poultry production.

01.04 07 Animal Nutrition

The study of the relationship in agricultural animals of proteins, fats, carbohydrates, water, minerals, vitamins, and feed additives in the production of meat, milk, eggs, and wool.

01.04 99 Other Animal Sciences (Specify)

01.05 ORNAMENTAL HORTICULTURE

The study of the culture and production of ornamental flowers, plants, shrubs, and trees, and the establishment, development, and management of ornamental horticulture enterprises.

01.05 01 Arboriculture

The study of the principles and practices involved in the culture and maintenance of woody plants used for decoration and shade purposes.

01.05 02 Floriculture

The study of the principles and practices involved in field or greenhouse production of flowers and the arrangement of such flowers for ornamental purposes.

01.05 03 Greenhouse and Nursery

The study of the principles and practices involved in producing plants under glass and in other artificial environments, including production of turf, plants, shrubs or trees for the purposes of transplanting or propagating them, including nursery operation, maintenance, and management.

01.05 04 Landscaping

The study of the principles and practices involved in locating, planting, and maintaining turf, plants, shrubs, trees, or

devices for the beautification of home grounds and other areas of human habitation and recreation.

01.05 05 Turf Grass

The study of the principles and practices in growing, establishing, managing, and maintaining grass for beautification of homes, grounds, and other areas of human habitation or recreation.

01.05 99 Other Ornamental Horticulture (Specify)

01.06 PLANT SCIENCES

The study of the principles and practices involved in the culture of plants for the production of food and fiber and soil conservation.

01.06 01 Plant Anatomy and Physiology

The study of the structure of agricultural plants, its relationship to life processes in plants, and the subsequent implications on production principles and practices.

01.06 02 Plant Genetics and Reproduction

The study of principles of inheritance and their applications for the improvement of plants through breeding and selection.

01.06 03 Plant Insects and Control

The study of beneficial and harmful insects, spiders, snails, slugs, ticks, and mites, and their impact on plant production and control methods.

01.06 04 Plant Management and Production

The study of the relationship between growth stimulants and physical characteristics of plants and the cultural management of this relationship in such techniques as irrigation and pesticide application.

01.06 04 01 Production of Field Crops

The study of the cultural principles and practices involved in the production and use of field crops, including the topics of genetics, nutrition, soils, plant pathology, entomology, and disease and pest control.

01.06 04 02 Production of Fruits

The study of the cultural principles and practices involved in the production of citrus fruits, apples, peaches, strawberries, and other kinds of fruit.

01.06 04 03 Production of Specialty Crops

The study of the cultural principles and practices of specialty agriculture crops such as peanuts, cotton, tobacco, silkworm, and mulberry.

01.06 04 04 Production of Vegetables

The study of the cultural principles and practices involved in the production of potatoes, tomatoes, beans, seed corn, peas, and other vegetable crops.

01.06 05 Plant Nutrition

The study of the relationship of various substances such as nitrates and potash in the production of grains, fibers, and other forms of agricultural plant life.

01.06 06 Plant Pathogens and Prevention

The study of symptoms, causes, and control of agricultural plant diseases, infestations, and injuries; and the chemical, physical, biological, cultural, and genetic methods of control of plant diseases and associated plant pathogens.

01.06 07 Plant or Plant Products Selection and Evaluation

The study of plant taxonomy and plant products emphasizing qualitative aspects such as field crops judging, seed selection, or plant oil products comparisons.

01.06 99 Other Plant Sciences (Specify)

01.07 SOIL SCIENCES

The study of the physical, chemical, biological, and fertility principles and properties of soils in relation to their management for crop production and other agricultural operations.

01.07 01 Soil Chemistry

The study of the composition and changes in the various elementary forms of soil matter, such as the determination of the amount of nitrogen compounds in a soil.

01.07 02 Soil Classification

The study of the identification and systematic categorization of soil according to soil growth potential, soil slope, and physical properties of soil.

01.07 03 Soil Conservation and Land Use

The study of the principles and practices involved in maintaining soil stability and productivity, including the prevention of erosion, pollution, waterlogging, plant nutrient exhaustion, and the accumulation of pollutants.

01.07 04 Soil Fertility

The study of soil composition and nutrient capabilities necessary for plant growth, including the identification of differences between available and required plant growth nutrients.

01.07 05 Soil Physics

The study of the physical properties and interactions of matter and the energy of soils.

01.07 06 Soil Texture

The study of the characteristic physical structure of soil composition, such as sand, clay, or loam.

01.07 99 Other Soil Sciences (Specify)

01.08 FISHERIES

The study of the principles and practices involved in protecting, breeding, and harvesting fish for sport and commercial purposes.

01.08 01 Fisheries Biology

The study of the life processes of waterlife, including age and rate of growth, populations and habitat, reproduction, and mortality.

01.08 02 Fisheries Management

The study of the principles and practices involved in the conservation, development, and harvesting of waterlife, including hatcheries operations and related law enforcement practices.

01.08 02 01 Commercial Fisheries

The study of the commercial processing and marketing of waterlife for food and other purposes.

01.08 02 02 Nonedible Water Life

The study of plant and animal waterlife from which medicinals, minerals, and other chemicals are extracted.

01.08 02 03 Sport Fisheries

The study of the processing and harvesting of fish for game and recreation fishing.

01.08 99 Other Fisheries (Specify)

01.09 FORESTRY

The study of the science, art, and practice of managing and using for human benefit the natural resources that occur on, and in association with, forest lands.

01.09 01 Forest Management and Administration

The study of the theory, principles, and practices of organizing, planning, and controlling the utilization of forest lands, including study of the political and legal processes relating to forest management.

01.09 01 01 Forest Economics

The study of financial considerations involved in the use of forest resources for the production of goods and services.

01.09 01 02 Forest Harvesting

The study of techniques for harvesting and transporting products from forest lands to mills, including cartography, land surveying, and road, trail, and facilities construction.

01.09 01 03 Forest Fire Control and Use

The study of prevention and suppression of wild fire and the application of prescribed burning of forest resources.

01.09 01 04 Forest Land-Use Planning

The study of the development of alternative ways of allocating the use of forest land, and the identification of the consequences of each alternative for the purpose of guiding decision-makers.

01.09 01 05 Forest Measurements

The study of the quantification and inventory of forest resources.

01.09 01 06 Forest Watershed Management and Hydrology

The study of the manipulation of vegetation to maximize the production of clean, clear water for human consumption, for manufacturing, and for irrigation.

01.09 02 Forest Biology

The study of plant and animal life in the forest, including ecological interrelationships; identification, classification, and habitat of trees and shrubs; the art of growing trees in managed stands; and the application of plant genetics to tree improvement.

01.09 02 01 Dendrology

The study of the identification and systematic classification of trees.

01.09 02 02 Silvics

The study of the life history and general characteristics of forest trees and stands with reference to local factors as a basis for the practice of silviculture.

01.09 02 03 Silviculture

The study of the science and art of growing and tending forest crops based on a knowledge of silvics.

01.09 02 04 Tree Improvement

The study of the application of plant genetics to the development of trees with superior inherited traits.

01.09 03 Forest Products and Wood Technology

The study of products that are generated from resources removed from the forest, or that are manufactured from fiber harvested in the forest.

01.09 03 01 Lumber Manufacturing

The study of the techniques involved in the conversion of logs into boards.

01.09 03 02 Paper Manufacturing

The study of the techniques involved in the conversion of wood pulp into newsprint, kraft, and other paper grades.

01.09 03 03 Plywood Manufacturing

The study of the techniques involved in the conversion of logs into laminated sheets.

01.09 03 04 Pulp Manufacturing

The study of the techniques involved in the conversion of logs into cellulose.

01.09 04 Physical Properties of Wood

The study of the structure of wood: its composition, identification, and preservation.

01.09 04 01 Wood Anatomy

The study of the micro and macro structure of wood.

01.09 04 02 Wood Chemistry

The study of the elemental composition and compound derivatives of tree components.

01.09 04 03 Wood Identification

The study of features of wood structure vital to classification of tree species.

01.09 04 04 Wood Preservation

The study of chemical treatments of wood products, including the preservation of posts, poles, and piling for durability.

01.09 99 Other Forestry (Specify)

01.10 OUTDOOR RECREATION

The study of techniques of planning and maintaining outdoor recreation sites and programs in the woodland environment.

01.11 RANGE SCIENCE

The study of the theories, principles, and practices involved in the management of range lands.

01.11 01 Range Administration

The study of the decision-making processes that determine optimum use of the various components of wildland grazing sites.

01.11 02 Range Biology

The study of the plant and animal life on the range, including the range ecological system, analysis of range flora, analysis of range soils, and methods of range soil conservation.

01.11 99 Other Range Science (Specify)

01.12 WILDLIFE

The study of the principles and practices involved in protecting, breeding, and harvesting game and nongame animals.

01.12 01 Wildlife Biology

The study of life processes of wild game and nongame animals, including the study of wildlife population dynamics and wildlife reproduction.

01.12 02 Wildlife Management

The study of the principles and practices involved in the preservation and improvement of habitat for game and nongame wildlife, including relevant law enforcement procedures.

01.12 99 Other Wildlife (Specify)

01.13 LAND RECLAMATION

The study of the techniques of reclaiming waste, desert, marshy, or submerged land for cultivation or other use.

01.14 RENEWABLE NATURAL RESOURCES

The study of the general principles and processes involved in the conservation and improvement of renewable natural resources such as land, minerals, air, vegetation, and water for economic, recreational, and conservation purposes.

01.99 OTHER AGRICULTURE AND RENEWABLE NATURAL RESOURCES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN AGRICULTURE AND RENEWABLE NATURAL RESOURCES, SEE APPENDIX E.

02 ARCHITECTURE AND ENVIRONMENTAL DESIGN

Subject matter concerned with the methods by which man attempts to create, adapt, alter, preserve, and control his physical and social surroundings.

02.01 ENVIRONMENTAL DESIGN

The study of processes that promote the creation of aesthetic patterns, forms, and structures in harmony with the contextual environment to further human purposes.

02.01 01 Architectural Design

The study of the systematic process of creating architectural environments, synthesizing knowledge of functional relationships, human behavior, structural and environmental systems and technologies, and aesthetic sensitivity.

02.01 02 Landscape Architectural Design

The study of design processes as applied to the ordering of man-made structures and objects and animate and inanimate natural materials on the landscape to further human purposes, synthesizing knowledge of functional relationships, human behavior, ecology, land form, construction technology, and aesthetic sensitivity.

02.01 02 01 Grading

The study of the techniques of utilizing the nature of earth and earth movement in establishing the design of a grade or slope, synthesizing functional needs and aesthetic sensitivity.

02.01 02 02 Planting

The study of plant materials, their optimum growing conditions, and their use in climatic modification, for visual enhancement of physical developments, both interior and exterior, and for other functional and aesthetic purposes.

02.01 03 Interior Design

The study of techniques of synthesizing color, form, space, line, and textural elements for architectural environments emphasizing aesthetic considerations.

02.01 04 Urban Design

The study of the systematic process of creating and modifying those physical elements which constitute a city; synthesizing function, aesthetic sensitivity, technology, and social, psychological, and economic well-being.

02.01 05 Graphic Design

The study of the use of interior and exterior graphic elements for identifying, directing, informing, and controlling the movement of people within an environment.

02.01 99 Other Environmental Design (Specify)

02.02 DESIGN AND PLANNING TECHNOLOGY

The study of the processes, procedures, observations, and techniques that are essential to the development of designs for interior and exterior environments.

02.02 01 Design Programing

The study of the methods through which data about the needs of a user of any ultimate facility are determined and expressed for the instruction of the designer in the development of a design solution.

02.02 02 Budgeting and Cost Analysis

The study of the techniques of quantity survey, cost estimating, scheduling, and project controls used in forecasting the construction costs and methods of financing projects.

02.02 03 Site Analysis

The study of the techniques of analyzing and evaluating the physical, ecological, and visual attributes or restraints of an individual site, including the visual and cultural attributes or restraints of the contextual environments.

02.02 04 Landscape Assessment

The study of the techniques of analyzing and evaluating the physical, ecological, and visual attributes of the landscape.

02.02 05 Codes and Controls

The study of all codes, standards, zoning, and ordinances that are applicable to the design and planning of structures and spaces.

02.02 06 Design Specializations

The study of specific technology which is relevant only to a particular field of design.

02.02 06 01 Marine Architecture

The study of the materials and technological knowledge required to design marine facilities.

02.02 06 02 Recreation and Sports Area Design

The study of design processes specific to recreation and sports areas, including parks and golf courses, that synthesize knowledge of recreation needs, games and game space requirements, land form, construction and maintenance technologies, and aesthetic sensitivity.

02.02 06 03 Temporary Structures

The study of the materials and methods of fabrication required in the design of relocatable structures, such as air, tent and geodesic structures, movable classrooms, and mobile homes.

02.02 06 04 Preservation and Restoration

The study of the technology required in planning, funding, and implementing projects for historic preservation, restoration, and adapted use of buildings, landscape, and neighborhoods.

02.02 99 Other Design and Planning Technology (Specify)

02.03 CONSTRUCTION AND DESIGN IMPLEMENTATION

The study of the methods of fabrication and erection of structural systems, life support systems, and other elements

essential to the execution of designed spaces and structures, including the management of such execution.

02.03 01 Construction Technology

The study of the coordinated methods of construction which, when executed in accordance with an environmental design, results in the completion of interior and exterior environments. These methods may be applied to such factors as foundations, water-proofing, paving, structural systems, fireproofing, masonry, roofing, planting, and lighting.

02.03 02 Construction Management

The study of the procedures and techniques involved in all phases of construction, including estimating and bidding, scheduling and control, contract document interpretation, building systems, construction practices, and labor and safety practices.

02.03 99 Other Construction (Specify)

02.04 COMMUNICATION IN ARCHITECTURE AND ENVIRONMENTAL DESIGN

The study of the methods of organizing, recording, and transmitting information relevant to the formulation and execution of architectural design, including the development of skills in drafting, drawing, rendering, and the construction of scale models and renderings for buildings, landscapes, and other environmental elements.

02.04 01 Graphic Communication

The study of the methods, materials, and techniques involved in the communication of ideas, concepts, relationships, and envisioned design projects through the use of diagrams, graphs, drawings, and other graphic forms.

02.04 02 Architectural Drafting

The study of the theories of projection, the materials, the techniques, and the symbols used to communicate explicit information about envisioned design projects.

02.04 03 Rendering

The study of the materials and techniques used in specialized types of drawing which are intended to bring out the spirit and visual effect of envisioned design projects.

02.04 04 Model Building

The study of the materials and techniques used in the construction of small-scale, three-dimensional prototypes of envisioned design projects.

02.04 05 Contract Documents

The study of legal documents used in construction, including construction drawings, specifications, contracts, bonds, addendas, change orders, liens, authorizations for payment, substantial completion agreements, and warrantees.

02.04 05 01 Construction Drawings

The study of the materials, techniques, and symbols used in the preparation of drawings of a design which will facilitate construction and design implementation.

02.04 05 02 Specifications

The study of written instructions that describe in detail the construction work to be undertaken, or the materials, furnishings, and plantings to be purchased and installed.

02.04 99 Other Communication in Architecture and Environmental Design (Specify)

02.05 STRUCTURAL TECHNOLOGY

The study of the behavior and utilization of structural materials in building construction.

02.05 01 Steel Structures

The study of the fundamentals of structural design in steel.

02.05 02 Concrete Structures

The study of the fundamentals of structural design in concrete.

02.05 03 Wood Structures

The study of the fundamentals of structural design in wood.

02.05 04 Unit Masonry

The study of the fundamentals of structural design in unit masonry.

02.05 05 Combined Structures

The study of the fundamentals of structural design in the fabrication of structures which incorporate a combination of materials.

02.05 99 Other Structural Technology (Specify)

02.06 ENVIRONMENTAL TECHNOLOGY

The study of the methods and materials required to provide these environmental elements that affect the physical well-being of the occupants of the space being modified or constructed.

02.06 01 Environmental and Energy Systems

The study of the theory and application of environmental-mechanical principles involved with comfort technology, waste disposal techniques, electrical systems, and lighting systems.

02.06 01 01 Heating, Ventilating, and Air Conditioning

The study of the utilization of temperature and air flow systems in interior and exterior environments of a residential, commercial, recreational, industrial, or institutional nature.

02.06 01 02 Lighting

The study of the utilization of illumination or lighting systems in interior and exterior environments of a residential, commercial, recreational, industrial, or institutional nature.

02.06 01 03 Plumbing

The study of the utilization of water, liquid waste, or plumbing systems in interior and exterior environments of a residential, commercial, recreational, industrial, or institutional nature.

02.06 01 04 Storm Drainage

The study of the utilization of rain, snow, or hail removal systems in interior and exterior environments of a residential, commercial, recreational, industrial, or institutional nature.

02.06 01 05 Irrigation

The study of the utilization of systems for the artificial application of water in interior and exterior environments of a residential, commercial, recreational, industrial, or institutional nature.

02.06 01 06 Alternative Energy Systems

The study of the utilization of alternative energy systems in interior and exterior environments of a residential, commercial, recreational, industrial, or institutional nature.

02.06 02 Acoustics

The study of the techniques and materials used in controlling sound, both objectionable and desirable, in interior and exterior environments.

02.06 03 Building Transportation Systems

The study of the design principles governing the selection of appropriate transportation systems for various settings, and the principles governing the aesthetic and functional utilization of the system on the site.

02.06 03 01 Elevators

The study of the utilization of elevator systems in interior and exterior environments of a residential, commercial, recreational, industrial, or institutional nature.

02.06 03 02 Escalators

The study of the utilization of escalators in interior and exterior environments of a residential, commercial, recreational, industrial, or institutional nature.

02.06 03 03 Moving Walkways

The study of the utilization of moving walkways in interior and exterior environments of a residential, commercial, recreational, industrial, or institutional nature.

02.06 99 Other Environmental Technology (Specify)

02.07 MATERIALS OF ARCHITECTURE AND ENVIRONMENTAL DESIGN

The study of natural and artificial substances such as earth, wood, metal, and plastic used in various parts of building structures and in interior and exterior environments.

02.07 01 Construction Materials

The study of the materials that are used in various parts of buildings and outdoor structures.

02.07 02 Plant Materials

The study of the trees, shrubs, evergreens, flowers, turf, erosion control plants, and other related materials that are used in the construction of interior and exterior environments.

02.07 03 Interior Components

The study of the materials, methods, and equipment that are utilized in the execution of interior environments, including such things as furniture, drapes, and carpeting.

02.07 99 Other Materials in Architecture and Environmental Design (Specify)

02.08 GENERAL PERSPECTIVES OF ARCHITECTURE AND ENVIRONMENTAL DESIGN

The study of the historical aspects of architecture and environmental planning, the development of professional practice, and the responsibilities that follow construction.

02.08 01 History of Environments

The study of the development, change, and trends in human interaction with the environment.

02.08 01 01 Architectural History

The study of the development, change, and trends of architecture in the past, and the influence architecture has had on cultural and social development.

02.08 01 02 Landscape Architectural History

The study of the development, change, and trends of landscape architecture in the past, and the influence landscape architecture has had on cultural and social development.

02.08 01 03 Interior Architectural History

The study of the development, change, and trends of architectural interiors, and the influence interior architecture has had on cultural and social development.

02.08 02 Professional Practices in Architecture and Environmental Design

The study of office practices, including an analysis of the principal divisions of service and office procedures, and the responsibilities, ethics, and behavior of the professions within architecture and environmental design.

02.08 03 Post-Construction Management

The study of management techniques of occupying or operating a facility upon completion of its construction.

02.08 99 Other General Perspectives of Architecture and Environmental Design (Specify)

02.09 PLANNING

The study of the processes involved in the development of alternative ways of achieving various societal goals, including the identification of the consequences of each alternative, for the purpose of guiding decision-makers in their deliberations.

02.09 01 Community-Development Planning

The study of the application of the planning process to the maintenance, development, or revitalization of a community.

02.09 02 Housing Planning

The study of the application of the planning process to the problems of housing.

02.09 03 Land-Use Planning

The study of the application of the planning process to the development of land-use regulations.

02.09 04 Natural-Resource Planning

The study of the application of the planning process to the development, utilization, and conservation of natural resources.

02.09 05 Open Space Planning

The study of the application of the planning process to the development, utilization, and maintenance of open spaces.

02.09 06 Recreation Resources Planning

The study of the application of the planning process to the development, utilization, and maintenance of recreational resources.

02.09 07 Social Planning

The study of the application of the planning process to the development of environmental programs designed to deal with major social needs related to such things as person-power, criminal justice, health, and education.

02.09 08 Economic Planning

The study of the application of the planning process to the development of environmental programs designed to deal with major economic needs.

02.09 09 Transportation Planning

The study of the application of the planning process to the development of programs designed to deal with transportation needs.

02.09 09 01 Vehicular

The study of the application of design principles to solve environmental problems created by vehicle traffic.

02.09 09 02 Pedestrian

The study of the application of design principles to solve environmental problems created by pedestrian traffic.

02.09 09 03 Mass Transit

The study of the application of design principles to solve environmental problems created by the conveyance or transportation of large numbers of persons or goods.

02.09 10 Urban, Regional and Other Area Planning

The study of the application of the planning process to the development of environmental programs designed to deal with urban, regional, and other geographically distinct areas.

02.09 11 Water Resources Planning

The study of the application of the planning process to the development, utilization, and conservation of water resources.

02.09 12 Environmental Planning

The study of the application of the planning process to the development of programs concerned with environmental problems, needs, and concerns.

02.09 13 Historic Preservation Planning

The study of the application of the planning process to the development, utilization, and conservation of historic districts and communities.

02.09 99 Other Planning (Specify)

02.99 OTHER ARCHITECTURE AND ENVIRONMENTAL DESIGN (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER

(INTERDISCIPLINARY) IN ARCHITECTURE AND ENVIRONMENTAL DESIGN, SEE APPENDIX E.

03 ARTS, VISUAL AND PERFORMING

Subject matter concerned with the creation and perception of auditory, kinesthetic, and visual phenomena which express ideas and emotions in various form, subject to aesthetic criteria and related functions.

03.01 DANCE (See 19.04 – Dance)

The study of the history, criticism, theory, choreography, and performance of dance, and the development of dance skills and techniques.

03.01 01 Dance Studio and Performance

The study of the performance, choreography, and development of skills for any of the various kinds of dance which may include, but not limited to, ballet, modern, jazz, ethnic, and folk dance.

03.01 02 Dance Studies

The study of dance as an art form through its literature, history, theory, and composition.

03.01 03 Dance in Education

The study of those aspects of dance which have specific relevance to educational settings.

03.01 99 Other Dance (Specify)

03.02 FILM AS ART (See 05.03 – Film as Communication)

The study of the historic development, aesthetic qualities, and creative process of the moving image as a means of artistic expression.

03.02 01 Art Film Production

The study and practice of the technique and skills involved in the creation of motion pictures as an art form.

03.02 02 Art Film Studies

The study of the historical, critical, theoretical, and educational aspects of motion pictures as an art medium.

03.02 99 Other Film as Art (Specify)

03.03 MUSIC

The study of the art and science of combining sounds of various timbre in harmonic, rhythmic, or melodic forms which are artistically expressive.

03.03 01 Music Studio and Performance

The applied study of and performance on musical instruments, or the applied study of voice and vocal performance, either solo or in ensemble.

03.03 01 01 Applied Instrumental and Vocal Music

The study of performance and repertory on a solo instrument, the study of performance and repertory in voice, or the study of instrumental or vocal solo performance and repertory.

03.03 01 02 Ensembles

The study of performance and repertory involving two or more players and/or singers.

03.03 02 Music Studies

The study of music as an art form through its literature, history, criticism, theory and composition, including the study of conducting.

03.03 02 01 Music Literature

The study of repertory from earliest notation to the present.

03.03 02 02 Music History, Musicology, and Criticism

The study of the history, role, and significance of music to provide an understanding and appreciation of various musical forms in different cultures.

03.03 02 03 Music Theory

The study of the principles, forms, and foundations of music.

03.03 02 04 Music Composition

The study of techniques of creating and arranging tonal combinations and sequences, including the creation itself. This applies also to electronic music.

03.03 02 05 Music Conducting

The study of conducting techniques, interpretation, and style that may lead to a musical performance.

03.03 02 06 Ethnomusicology

The study of music as it relates to the culture and background of a given group or people.

03.03 02 07 Church Music

The study of music composition and performance for religious or sacred purposes.

03.03 03 Music in Education

The study of the aspects of music which have specific relevance to educational settings.

03.03 04 Commercial Music

The study of music as it pertains to recording, television, radio, publishing, and related industries.

03.03 05 Musical Instrument Design, Maintenance, and Repair

The study of the techniques of designing, maintaining, and repairing musical instruments.

03.03 99 Other Music (Specify)

03.04 THEATRE ARTS

The study of the development, theory, and processes of creating live performances through human expressive modalities.

03.04 01 Theatre Arts Studio and Performance

The study of and engagement in the processes of live performance in the theatre.

03.04 01 01 Acting

The study of such elements as stage voice, stage movement, mime, and dramatic improvisation to create characters for presentation on the stage.

03.04 01 02 Directing

The study of the planning, staging, and implementing of dramatic productions.

03.04 01 03 Playwriting

The study and creation of form, structure, and style in the written play.

03.04 01 04 Technical Theatre and Design

The study of the physical aspects of theatrical production, including the design and realization of scenery, costume, lighting, makeup, sound, properties, and surrounding environment.

03.04 02 Theatre Studies

The study of the theatre as an art form through its literature, history, theory, criticism, composition, and practice.

03.04 02 01 Theatre Theory and Criticism

The study of the aesthetic bases of theatre, emphasizing questions of artistic value and merit, their relationship to relevant social and behavioral studies, and to other aspects of contemporary life and times.

03.04 02 02 Theatre History

The study of the development of dramatic literature, criticism, the physical theatre, the elements of production, and the artists and craftsmen who have contributed to the theatrical heritage.

03.04 02 03 Dramatic Literature

The study of the types, forms, and styles of plays from the past and present.

03.04 03 Theatre in Education

The study of various aspects of theatre arts such as creative dramatics, developmental drama, and informal drama which have specific relevance to educational settings including schools, community arts centers, museums, and various social and recreational settings.

03.04 99 Other Theatre Arts (Specify)

03.05 VISUAL ARTS

The study of subject matter concerned with visual phenomena which embody aesthetic content and creative effort.

03.05 01 Visual Arts Studio and Production

The study of the organization of materials and media for two or three-dimensional visual effects that communicate ideas and express motions subject to aesthetic and functional considerations.

03.05 01 01 Fine Arts

The study and development of the skills and abilities that are necessary for the production of unique works of visual art that express purely artistic intention, including the art forms of drawing, painting, and printmaking; sculpture in a variety of media; and photography and electronic imagery.

03.05 01 02 Crafts

The study of activities relating to the conception and production of one-of-a-kind objects which have aesthetic merit and which demonstrate creative effort, including those in wood, metal, clay, fiber, and other materials.

03.05 01 03 Foundations of Visual Arts Design

The study of the principles of visual organization which emphasize aesthetic qualities such as light, color, shape, and pattern.

03.05 01 04 Application of Visual Arts Design

The study of the utilization of visual design skills for applied arts purposes including drawing, the organization of two or three-dimensional materials, and the selection of materials for artistic and functional purposes, as well as study of the fields of illustration, graphic design, interior design, industrial design, technical and mechanical illustration, and electronic imagery.

03.05 02 Visual Arts Studies

The study of historical, social, psychological, philosophical, critical, and educational aspects of the visual arts.

03.05 02 01 Art History and Appreciation

The study of the history of the visual arts and their relationship to concurrent events, the evolution of artistic styles, the lives of artists, and the role of the visual arts in human affairs, including contemporary times.

03.05 02 02 Art Theory and Criticism

The study of the aesthetic bases of the visual arts emphasizing questions of artistic value and merit, including their relationship to relevant social and behavioral studies and other aspects of contemporary life and times.

03.05 03 Visual Arts in Education

The study of various aspects of the visual arts which have specific relevance to educational settings, including schools, community art centers, museum programs, and social and recreational settings.

03.05 04 Art Restoration, Preservation, Exhibition, and Cataloging

The study of the theory and practice of maintaining, restoring, repairing, exhibiting, and cataloging works of visual art.

03.05 99 Other Visual Arts (Specify)

03.06 RELATED ARTS

The study of the arts, their relationship to each other, and their humanistic concerns.

03.06 01 Related Arts Studio and Production

The study of processes and performances that involve two or more of the visual and performing arts.

03.06 01 01 Multi-media Production

The study of the combination of two or more of the visual and performing arts.

03.06 01 02 Music Theatre

The study of the type of multi-media utilization that combines aspects of music, dance, and theatre such as "musical comedy" and opera.

03.06 02 Related Arts Studies

The study of the theory, techniques, history, and development of the related arts.

03.06 02 01 Humanities

The study of subjects or courses that embrace a humanistic relationship among ideas as expressed through the visual, performing, and other arts.

03.06 02 02 Allied Arts

The study of the relationship of the arts within such contexts as principles, techniques, elements, style, structure, subject, function, and media.

03.06 02 03 Ethnic Arts

The study of areas of the arts that emphasize or reflect geographical, racial, ideological, political, religious, or social aesthetic concepts.

03.06 03 Related Arts and Aesthetic Education

The study of those areas of the arts that are concerned with the personal development of aesthetic perception, response, and sensitivity.

03.06 04 Related Arts Management and Administration

The study of the techniques of planning, organizing, and controlling artistic productions such as art shows, film festivals, theatrical productions, concert series, and recitals.

03.06 99 Other Related Arts (Specify)

03.07 ARTS THERAPY

The study of the utilization of the visual and performing arts as a diagnostic and therapeutic mode concerned with mental and physical health.

03.07 01 Art Therapy

The study of the utilization of art as a diagnostic and therapeutic mode concerned with mental and physical health.

03.07 02 Dance Therapy

The study of the utilization of dance as a diagnostic and therapeutic mode concerned with mental and physical health.

03.07 03 Drama Therapy

The study of the utilization of drama as a diagnostic and therapeutic mode concerned with mental and physical health.

03.07 04 Music Therapy

The study of the utilization of music as a diagnostic and therapeutic mode concerned with mental and physical health.

03.07 99 Other Arts Therapy (Specify)

03.99 OTHER ARTS, VISUAL AND PERFORMING (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN ARTS, VISUAL AND PERFORMING, SEE APPENDIX E.

04 BUSINESS

Subject matter concerned with processes of purchasing, selling, producing, and interchanging of goods, commodities, and services for the purpose of gaining a profit, advantage, or benefit. Included in this classification is subject matter applicable to both Distributive Education and office occupations.

04.01 ACCOUNTING

The study of the principles, procedures, and theory of organizing, maintaining, and auditing business and financial transactions.

04.01 01 Accounting Principles

The study of the principles, procedures, and theory of accounting, including the preparation, maintenance, and auditing of financial records and the preparation and analysis of statements.

04.01 02 Accounting Systems

The study and analysis of techniques and procedures used to evaluate and improve existing accounting systems.

04.01 03 Auditing

The study of the concepts, objectives, and ethics applicable to auditing, including audit plans, internal control, sampling, and specific auditing procedures concerned with such items as cash, investments, receivables, inventories, plant, equipment, expenses, and writing an audit report.

04.01 04 Bookkeeping

The study of the fundamental principles involved in the preparation and maintenance of financial records that are concerned with management and operations.

04.01 05 Controllership and Budgeting

The study of the theories and practices of regulating expenditures, of planning for capital spending, of establishing cash budgets, and dealing with other accounting problems.

04.01 06 Cost Accounting

The study of procedures and practices involved in accounting for materials, labor, overhead, and burden, by job-order, process, or operation, including systems of accounting related to sales and accounting used as a tool of managerial control.

04.01 07 Data Processing Accounting

The study of the principles and techniques of utilizing modern electronic data processing applications for accounting records and systems.

04.01 08 General Accounting

The study of principles, procedures, and theory of organizing, maintaining, interpreting, reporting, and auditing financial transactions of business and industry.

04.01 09 Governmental and Institutional Accounting

The study of the principles and procedures of applying fund accounting and budget control to governmental units and nonprofit institutions.

04.01 10 Machine Bookkeeping

The study of the principles and procedures of using bookkeeping machines to post accounts receivable and other control account data.

04.01 11 Managerial Accounting

The study of the principles and procedures of using accounting reports for managerial decisionmaking.

04.01 12 Payroll Accounting

The study of the principles and procedures of payroll accounting and control, including the study of Federal and State laws and their interpretations, and the preparation of reports required by governmental agencies.

04.01 12 01 Payroll Recordkeeping

The study of Federal and State laws that affect payroll; of basic payroll forms and records and their uses; of practices of calculating hours worked, overtime, gross and net pay, and deductions of employees; and of practices of preparing records and required government reports.

04.01 13 Recordkeeping

The study of the principles and procedures of using subsystems of accounting to prepare and maintain records for cash and banking, payroll, billing, inventory, accounts receivable, accounts payable, and other similar records within the total accounting system.

04.01 14 Tax Accounting

The study of accounting principles, procedures, and regulations applicable to the maintenance of records and the preparation and filing of income tax returns for individuals, partnerships, corporations, and other types of organizations.

04.01 99 Other Accounting (Specify)

04.02 ADMINISTRATIVE AND OFFICE SERVICES

The study of the techniques and procedures for collecting, classifying, processing, computing, communicating, reporting, storing, and retrieving information in an organization.

04.02 01 Administrative Procedures

The study of the principles and techniques of administration and supervision that are employed in a variety of organizational settings.

04.02 01 01 Administrative Office Procedures

The study of the principles and procedures of office administration, including organization of the office, office design, office procedures, personnel administration, employee training, records management, work simplification, management of accounting activities, and data processing functions.

04.02 01 02 Clerical Procedures

The study of the principles and procedures of using the skills of filing, recordkeeping, typewriting, telephone usage, human relations, office machine operation, and mail processing in a variety of organizations.

04.02 01 03 Secretarial Procedures

The study of the principles and procedures involved in the application and integration of secretarial skills in dictation-transcription, records management, communication, telephone usage, research and use of reference materials, and human relations.

04.02 02 Office Machines

The study of the principles and procedures of developing proficiency in the use of office machines, and of applying machine skills to office problems.

04.02 03 Records Management

The study of information storage and retrieval processes, including automated and non-automated filing, microfilming systems, retention and disposal of records, equipment and space layout, and the supervision, standards, and work measurement in the records division of an organization.

04.02 03 01 Filing

The study of the principles and procedures of coding, indexing, and filing, including the application of established rules to alphabetic, numeric, geographic, and subject filing systems.

04.02 03 02 Micrographics

The study of the principles and procedures of applying microforms to office operations, including the storage and retrieval of records on microfilm and microfiche.

04.02 04 Reprographics

The study of modern office duplication and copying equipment and systems, including the capabilities, feasibility, and use of various types of equipment and the techniques of master copy preparation.

04.02 05 Shorthand and Transcription

The study of the principles and techniques of recording dictation in symbol or other abbreviated form and the conversion of these abbreviated forms to typewritten documents using acceptable formats and correct spelling, punctuation, and grammar.

04.02 06 Specialized Secretarial Services

The study of the principles and techniques of applying secretarial procedures to specialized fields.

04.02 06 01 Bilingual Secretarial

The study of the principles and techniques necessary to satisfactorily perform the secretarial function in situations where fluency in speaking and writing two languages is required.

04.02 06 02 Legal Secretarial

The study of the special knowledge and skills needed by secretaries employed in law firms, court rooms, or other legal-related situations, and the application of secretarial skills to legal office settings.

04.02 06 03 Medical Secretarial

The study of the special knowledge and skills needed by secretaries employed in medical offices, hospitals, and other medical-related situations, and the application of secretarial skills to medical office settings.

04.02 06 04 Technical Secretarial

The study of the knowledge and skills necessary to perform secretarial functions in scientific, technological, or other technical office situations.

04.02 07 Typewriting

The study of the knowledge and skills necessary to operate a typewriter to produce personal and business correspondence and documents.

04.02 08 Word Processing

The study of the knowledge and skills needed to operate automated typing and transcription equipment, including the planning and production of correspondence, reports, and other documents.

04.02 99 Other Administrative and Office Services (Specify)

04.03 BANKING AND FINANCE

The study of the financial management of industrial and commercial enterprises; of commercial, savings, and mortgage banking; and of investment analysis and portfolio selection.

04.03 01 Business and Corporate Finance

The study of financial decision analysis, including alternatives for the allocation, valuation, and management of financial resources.

04.03 02 Consumer Finance

The study of the effect on the consumer of consumer budgeting, credit buying, borrowing money, risk protection, investment programs, home ownership, and retirement plans.

04.03 03 Credit and Collections

The study of the factors influencing and determining loan policies, methods of credit investigations and analysis, credit techniques, collection methods, and credit and collection problems.

04.03 04 Financial Institutions

The study of the purposes, principles, practices, and procedures of banks, savings and loan institutions, credit unions, stock exchanges, stock brokers, consumer finance agencies, and other financial institutions.

04.03 05 International Banking and Finance

The study of the balance of payments problems, exchange rates, exchange controls, the contemporary international monetary systems, and institutional characteristics of international financing of trade.

04.03 06 Investments and Securities

The study of the securities market, investments concepts, and the effects of economic business cycles on investments, including the study of stocks, mutual funds, bonds, unlisted and listed securities, and yield changes as they affect long-term holdings.

04.03 07 Monetary and Fiscal Policy

The study of the functions of money, bank creation of deposits and credit, Federal Reserve control of the money supply, and alternative policies in monetary and fiscal control.

04.03 08 Money and Banking

The study of monetary systems and financial institutions, including a study of the characteristics and functions of various types of banks, economic stabilization, governmental fiscal policy, balance of payments, and foreign exchange.

04.03 09 Mortgage Brokerage

The study of the organization and control of mortgage brokers, loan application procedures, credit analysis, appraisal of collateral, legal aspects, interim financing, and fundamentals of mortgage servicing.

04.03 10 Negotiable Instruments

The study of the provisions of the uniform negotiable instruments of law, including bills of lading, stock certificates, bonds, certificates of deposit, trade acceptances, warehouse receipts, and other similar banking instruments.

04.03 11 Principles and Theory of Finance

The study of the creation, allocation, and utilization of money, and the effect of monetary policy upon individuals, business, and national and international economics, including the study of investment characteristics of stocks and bonds, the securities market, and inflation and deflation.

04.03 12 Public Finance

The study of the principles and procedures of collective actions; State, Federal, and local revenues and expenditures; borrowing, grants-in-aid, and negative and progressive taxation as they affect the public sector.

04.03 13 Savings and Loan

The study of savings and loan organizations, including collection principles, liquidity, supervision, government agencies and home financing, customer services, and the system of financial flows of income to capital investment.

04.03 14 Supervision and Regulation of Banking and Finance

The study of the role of the Federal Reserve System, Federal and State legislation, and governmental regulations and controls in the operations of financial institutions.

04.03 99 Other Banking and Finance (Specify)

04.04 BUSINESS DATA SYSTEMS

The study of the theories and applications of management information systems, systems analysis, and other information systems that deal with business data and are generally characterized by logical patterns of clerical work flow from the point of original data gathering to completion of necessary reports and retrieval displays.

04.05 ENTREPRENEURSHIP

The study of all the facets of starting and conducting an enterprise or business, while assuming full control and risk.

04.05 01 Minority Enterprises

The study of the special skills and knowledge needed to undertake the formation of a business enterprise by members of a minority group, including a study of the special legislation intended to aid such enterprises.

04.05 02 Private Ownership

The study of that part of the economic system that is not owned by the government, characterized by corporations, partnerships, and proprietorships.

04.05 02 01 Corporation

The study of the principles, practices, and expertise needed to form, manage, and control a corporation, including the distribution of corporate powers, the financing of corporations, and the role of directors and shareholders.

04.05 02 02 Partnership

The study of the nature and purposes of businesses which are owned by two or more people, including their formation, obligations, managements, and dissolution.

04.05 02 03 Proprietorship

The study of the nature and purpose of a business enterprise which is completely owned, controlled, and managed by a single individual or a small group of people.

04.05 03 Public Ownership

The study of those corporations which offer goods or services to the public and the bulk of whose stock is held by quasi-governmental bodies under either profit or nonprofit charters.

04.05 03 01 Nonprofit Public Corporation

The study of the principles which govern the distribution of shares in a nonprofit corporation which operates under a policy by which no shareholder or trustee shares in the profits or losses of the enterprise.

04.05 03 02 Profitmaking Public Corporation

The study of the principles which govern the distribution of the shares of stock in a publicly held company, including issuance of stock certificates, granting of options to employees, and payment of dividends.

04.05 99 Other Entrepreneurship (Specify)

04.06 INFORMATION COMMUNICATIONS

The study of the principles and techniques of obtaining and giving information in a business setting.

04.06 01 Business Communications

The study of the principles and techniques of composing business correspondence and reports.

04.06 02 Business Communication Systems

The study of the principles and techniques of operating message centers and other communication systems in a business setting.

04.06 03 Information Communication Systems

The study of the nature and structure of organizations that specialize in transmitting information from senders to receivers, including an analysis of the services they provide.

04.06 03 01 United States Postal System

The study of the organization, management, functions, methods, procedures, and services of the United States Postal Service.

04.06 03 02 Private Delivery Systems

The study of the organization, management, methods, and services of private communication delivery systems.

04.06 03 03 Telecommunications Systems

The study of the services, methods, and procedures of organizations that provide electrical impulse communication systems such as telephone and telegraph.

04.06 04 Business Report Writing

The study of the principles and procedures of researching, organizing, and interpreting information for business reports.

04.06 99 Other Information Communications (Specify)

04.07 INSURANCE AND RISK MANAGEMENT

The study of risk analysis and personal and business insurance and their applications to life, disability, property, liability, and fiduciary trust and annuity underwriting.

04.07 01 Actuarial Science

The study of the principles of applying probability theory to insurance, including the basic principles of life, property, and casualty contingencies and the determination of annuity and insurance benefits, premiums, reserves, and expenses.

04.07 02 Casualty Insurance

The study of casualty coverages involved in automobile insurance; business, professional and personal liability insurance; burglary, robbery, and theft insurance; fidelity and surety bonds; disability insurance; and multiple line contracts.

04.07 03 Estate Planning

The study of life underwriting and programing problems, and the principles and methods of integrating life insurance, wills, trusts, business continuation agreements, and social security benefits into unified estate plans.

04.07 04 Fiduciary Trusts and Annuities

The study of various trusts and annuities as related to financial planning, including premium calculation, compound interest functions, and mortality tables.

04.07 05 Accident and Health Insurance

The study of the risk of economic loss by accident or disease and the various methods of handling such risks through health, hospitalization, or accident insurance.

04.07 06 Liability Insurance

The study of the principles of underwriting and of legal analysis of liability insurance contracts, ratemaking, financial reserves, and claims adjustment.

04.07 07 Life Insurance

The study of the principles of life insurance, including analysis of policies, contract provisions, premiums and reserves, selection and underwriting, reinsurance, and legal considerations.

04.07 08 Principles of Insurance

The study of major types of insurance, including life, fire, accident and health, automobile, workmen's compensation, transportation, and fidelity and surety bonds.

04.07 09 Property Insurance

The study of the principles of fire insurance, including the protection of mortgagee's interest, consequential loss coverage, allied fire lines and fire insurance rates, ocean and inland marine insurance, multiple line contracts, contract analysis, underwriting, and loss adjustment.

04.07 10 Risk Management

The study of risk management methods applicable to both personal and business nonspeculative risk arising from life and health, as well as property and liability contingencies, including the role of government relative to nonspeculative risk.

04.07 11 Group Security and Social Insurance

The study of factors affecting economic security and the insurance mechanisms, both private and public, designed to meet economic security needs on a group basis, including social insurance, group insurance, medicare and medicaid, social security, and retirement systems.

04.07 12 Personal Insurance

The study of the principles of insurance as they apply to the average citizen, with emphasis on the types of policies available and the matching of policies to the needs and financial position of policyholders.

04.07 13 Insurance Law

The study of the legal doctrines and concepts that are applicable to the field of insurance, including contract law; parties to the contract; insurable interest; agency powers; waiver and estoppel; warrantees, representation and concealments; the rights of the beneficiary; and provisions controlling and limiting loss.

04.07 14 Insurance Enterprise

The study of the principles of managing insurance companies and other risk bearing enterprises, including self-insurance and captive insurance organizations.

04.07 99 Other Insurance and Risk Management (Specify)

04.08 INTERNATIONAL BUSINESS

The study of export sales, trade controls, foreign operations, attitudes, monetary problems, and other areas of concern in the international business environment as it affects, or is affected by, a company's policies, procedures, and products.

04.09 MANAGEMENT

The study of planning, organizing, and controlling a business, including organizational and human aspects, with emphasis on various theories of management, the knowledge and understanding necessary for managing people and functions, and decisionmaking.

04.09 01 Business Policy

The study of the nature and development of the principles and goals by which a company conducts its business.

04.09 02 Management Applications

The study of the application of management methods and techniques to all kinds and sizes of business and other organizations.

04.09 02 01 Administrative Management

The study of the theory, principles, and practice of organizing, planning, and controlling the work of an organization.

04.09 02 02 Industrial Management

The study of the nature and application of management methods and techniques related to manufacturing companies.

04.09 02 03 Institutional Management

The study of the nature and application of management methods and techniques related to specific kinds of institutions.

04.09 02 04 Middle Management

The study and analysis of the management responsibilities of junior executives and supervisory personnel, including employee-management relations, administration of company policies, interpretation of records, profit controls, and product movement.

04.09 02 05 Production Management

The study of the systematic regulation and control of the manufacturing, fabricating, extracting, or processing of goods.

04.09 02 06 Small Business Management

The study of management functions, policies, and procedures that are characteristic of small business concerns.

04.09 02 07 Transportation Management

The study of the management principles and procedures that are involved in moving goods from one place to another by rail, truck, bus, or other conveyance.

04.09 03 Organizational Development and Behavior

The study of the behavior and motivations of individuals functioning in groups, the influence of styles of leadership that may be used by managers, and the means of intervention that may be used to improve interpersonal relations and team behavior.

04.09 04 Principles and Theory of Management

The study of the conceptual basis, and principles and theories of controlling, planning, and regulating business and other organizations.

04.09 05 Principles and Theory of Organization

The study of the concepts, principles, and theories of the interrelationship of the structure, authority, goals, and operations of business and other organizations.

04.09 99 Other Management (Specify)

04.10 MARKETING

The study of the principles, practices, and concepts involved in the performance of business activities which direct the transfer of goods and the acquisition of services from producer to consumer or user, including the study of marketing functions and institutions, activities having to do with effecting change in ownership and possession of goods and services, and the study of applied economics relating to the creation of time, place, and possession utility.

04.10 01 General Marketing

The study of introductory marketing principles, practices, procedures, and concepts.

04.10 02 Marketing Economics

The study of the economic principles of marketing, including the study of microeconomics and macroeconomics and economic decisionmaking of the individual business firm in relation to the industry of which it is a part.

04.10 03 Marketing Functions

The study of the principles, practices, and concepts involved in the major specialized activities and economic services inherent in directing the flow of goods from producer to consumer or user, including the functions of exchange, physical supply, and the facilitating functions.

04.10 03 01 Buying

The study of the process of concentrating or controlling goods to facilitate sale, purchase, production, or use, including buying for institutional consumption, for resale, for business use or industrial purposes, and procurement by governmental agencies.

04.10 03 02 Financing

The study of the principles and concepts involved in providing and managing funds and credit which directly relate to the transactions involved in the flow of goods and services from producer to consumer or industrial user, including the provision and management of funds needed to finance the carrying of stocks and the granting of mercantile and retail credit, including installment credit.

04.10 03 03 Marketing Research

The study of the principles, procedures, and concepts involved in gathering, recording, and analyzing facts about problems relating to the sale and transfer of goods and services from producer to consumer, including the study of relationships and adjustments between production and consumption, preparation of commodities for sale, physical distribution, wholesale and retail merchandising, and financial problems.

04.10 03 04 Risk

The study of the principles and concepts involved in the assumption of financial responsibility for loss, including the study of risk classifications, methods of handling risks, and risk management.

04.10 03 05 Selling, Promotion, and Advertising

The study of the principles, practices, and concepts involved in the process of assisting and persuading a prospective customer to purchase a product or service, including personal selling, advertising, display, and sales promotion.

04.10 03 06 Standardization and Grading

The study of the principles and concepts involved in the determination of basic specifications to which manufactured products must conform, and of classes into which the products of agriculture and extractive industries must be sorted, and the study of the process of sorting units of a proudct into the grades or classes established.

04.10 03 07 Storage

The study of the principles, practices, and concepts involved in the function of holding and preserving goods from the time of production to the time of final sale or remanufacture, including the study of the creation of time, form, and place utility, standards, and types of storage.

04.10 03 08 Transportation

The study of the physical transfer of products from the place of production to the place of consumption, or to and

from any intermediary points, including the study of the creation of place and time utility, and the planning, selection, and direction of the means and methods of transportation involved in the movement of goods in the marketing process.

04.10 04 Marketing Management

The study of the concepts, principles, practices, and procedures involved in planning, directing, and controlling the entire marketing activity of a firm or division of a firm, including the formulation of marketing objectives, policies, programs, and strategies.

04.10 04 01 Place Management

The study of the concepts, principles, and practices involved in the development of marketing management policies and strategies relating to the selection of distribution channels, distribution patterns, and channel supervision.

04.10 04 02 Price Management

The study of the concepts, principles, and practices involved in the development of marketing management strategies relating to the pricing of products, including the study of pricing procedures, policies, and related legislation.

04.10 04 03 Product Management

The study of the concepts, principles, and practices involved in the development of marketing management policies relating to product planning, product identification, diversification, and product-line strategy.

04.10 04 04 Promotion Management

The study of the concepts, principles, and practices involved in the development of marketing management policies relating to the organization and management of personal selling, advertising, and sales promotion strategies, activities, and techniques.

04.10 05 Marketing of Products

The study of the principles, practices, procedures, and concepts of marketing individual or homogeneous classes of industrial, agricultural, and consumer products from the point of production or extraction to the point of consumption or use.

04.10 05 01 Agriculture Products

The study of the principles, practices, and concepts involved in the transfer or flow of agricultural products from the farmers to the central markets, manufacturers, middlemen, and final consumer, including the study of agricultural products classifications, cooperatives, commodity exchanges, auctions, and related legislation.

04.10 05 02 Consumer Products

The study of the principles, practices, and concepts inherent in and incident to the transfer and movement of consumer products from the point of production to the point of final consumption, including the study of consumer goods classification, consumer legislation, product management, pricing, promotion, and the physical distribution of individual or homogeneous classes of consumer products, including the facilitating functions of marketing.

04.10 05 03 Industrial Products

The study of the principles, practices, and concepts involved in the transfer or movement of industrial products from the initial producer or extractor to the final producer or industrial user, including the study of industrial goods classification, demand analysis, marketing channels, pricing, promotion, and related legislation.

04.10 06 Marketing of Services

The study of the principles, practices, procedures, and concepts of marketing intangibles that are bought and sold to industrial, agricultural, business, or home users, including activities, benefits, or satisfactions which are offered for sale or are provided in connection with the sale of goods.

04.10 06 01 Business Services

The study of the principles, practices, and concepts involved in marketing services to businesses, including such services as sales, promotion, buying, marketing research, marketing management and consulting, office, security, maintenance, and employment.

04.10 06 02 Financial Services

The study of the principles, practices, and concepts involved in the marketing of services performed by banks, finance companies, stock exchanges, brokerage firms, mortgage companies, and insurance and investment companies in providing financial services to businesses and personal consumers, including allocation, valuation, and management of financial resources.

04.10 06 03 Hospitality Services

The study of the principles, practices, and concepts involved in the marketing of services performed by restaurants, hotels, motels, travel agencies, and the recreation and tourism industry for business and personal consumers.

04.10 06 04 Insurance Services

The study of the principles, practices, and concepts involved in the marketing of risk protection for life, health, property, and liability losses to businesses and personal consumers.

04.10 06 05 Personal Services

The study of the principles, practices, and concepts in marketing services of a personal nature which serve the needs of individual consumers.

04.10 06 06 Real Estate Services

The study of the principles, practices, and concepts involved in buying, selling, appraising, renting, managing, and leasing of real property.

04.10 07 Organization of Marketing

The study of the principles, practices, and concepts of marketing activity as conducted at various institutional levels and bases of geographical scope, including the study of the organization of the flow of ownership.

04.10 07 01 International Marketing

The study of the principles, practices, and concepts of marketing involved in exporting and importing, including the study of tariffs, embargoes, cartels, exchange rates, foreign markets, foreign investments, the role of foreign aid, and related legislation.

04.10 07 02 Manufacturing and Production

The study of the principles, practices, concepts, and functions of marketing, as conducted by the manufacturer or producer in directing the flow of goods to the industrial user or ultimate customer.

04.10 07 03 Marketing Integration

The study of the principles, practices, and concepts inherent in the process of vertical and horizontal integration of marketing activities and functions as related to industrial or business ownership.

04.10 07 04 Retailing

The study of the principles, practices, concepts, and functions of marketing, as conducted by the retailer in concentrating and selling products and services from the producer or middleman to the ultimate consumer.

04.10 07 05 Wholesaling

The study of the principles, practices, concepts, and functions of marketing, as conducted by the wholesaler in concentrating and dispersing products from the producer to the industrial user, retailer, or ultimate consumer.

04.10 99 Other Marketing (Specify)

04.11 PERSONNEL MANAGEMENT AND ADMINISTRATION

The study of the methods, principles, procedures, and understandings necessary to manage and administer programs that are directed to the welfare and working conditions of employees in a business or other organization.

04.11 01 Compensation

The study of the salaries of executives and managers, the commissions earned by salesmen, and the wages of workers in factories, mines, stores, restaurants, and all other forms of economic organizations.

04.11 02 Evaluation Techniques

The study of the principles and procedures for implementing job evaluation programs, including systems of organized evaluation, job ranking, rating devices, performance reviews, and the effect of evaluation on personnel supervision and administration.

04.11 03 Human Relations

The study of the principles and techniques of measuring and improving an employee's effectiveness in relating to customers, to other employees, and to persons outside the work environment.

04.11 04 Labor-Management Relations

The study of the history and development of the labor movement, including an analysis and interpretation of Federal and State legislation, union contracts, labor negotiation, conciliation, arbitration, and grievance procedures.

04.11 04 01 Collective Bargaining

The study of the process in which workers bargain as a unit with management in regard to wages, hours, and basic conditions of employment.

04.11 04 02 Contract Administration

The study of the methods, techniques, and process by which union-management contracts are carried out.

04.11 05 Recruitment, Selection, and Separation

The study of the various methods and practices by which business organizations find the personnel which they need, and by which employment is terminated.

04.11 06 Supervision

The study of superior-subordinate relationships and practices in business and industry, including techniques of employee induction, morale building, followup and evaluation, correction, grievances, and an analysis of leadership and motivation.

04.11 07 Training and Development

The study of the principles, organization, and techniques of individual and group training, including the development of initial and followup programs, department and sales meetings, practice training in skills, and acquisition of information.

04.11 08 Welfare and Safety

The study of the principles and practices followed by an employer for promoting the health, safety, and welfare of the employees through better work procedures, machinery, and rest periods.

04.11 99 Other Personnel Management and Administration (Specify)

04.12 QUANTITATIVE METHODS

The study of the mathematical and statistical methods and models which business organizations use to understand themselves and the environment, and to gain the maximum effectiveness and efficiency of their resources.

04.12 01 Business Research Methods

The study of the principles and methods of investigating business facts and problems to find more effective means of conducting a business.

04.12 02 Management Science

The study of the application of mathematical and analytical techniques such as modeling, programing, forecasting, and analysis in the design, implementation, monitoring, and control of organizational processes and operations to determine their purpose and effectiveness, and means for attaining maximum efficiency.

04.12 03 Operations Research (See 08.15 03 – Operations Research)

The study of the principles and procedures of analyzing management problems utilizing probability theory, continuous distributions, mathematical programing, queueing theory, Markov processors, replacement maintenance and inventory models, other mathematical models, and simulation and game theory.

04.12 99 Other Quantitative Methods (Specify)

04.13 REAL ESTATE

The study of the theory and techniques of buying, selling, appraising, renting, managing, and leasing of real property.

04.13 01 Appraisal and Valuation

The study of the techniques of general appraisal of the real estate market, including factors that affect the value of land, construction costs per square foot and cubic foot, factors in residential and commercial appraisals, and the translation of rental income into present value.

04.13 02 Land Use Controls

The study of the various means of regulating, controlling, or directing the way in which real property is used.

04.13 03 Principles of Real Estate

The study of the principles and procedures involved in the ownership and transfer of real property, including titles, liens, mortgages, contracts, brokerage, and laws governing real estate.

04.13 04 Property Management

The study of the principles and methods of managing office buildings, apartment houses, shopping centers, small properties, and other investment property.

04.13 05 Real Estate Economics

The study of the economic trends and factors which affect the value of real estate, including the nature and classification of land property, development, construction, subdivision, real estate evaluation, real estate cycles and business fluctuations, residential market trends, real property, and special purpose property trends.

04.13 06 Real Estate Finance

The study of principles and practices governing real estate financing, including mortgage and equity financing, sources of loans, loan procedures, and legislation governing mortgage lending.

04.13 07 Real Estate Investments

The study of the principles and procedures of selecting various types of commercial property for investment purposes, and analyzing location, income, operating expense, depreciation, and obsolescense to determine actual net income.

04.13 08 Real Estate Law

The study of the legal principles governing real estate transactions, including sales contracts, deeds, mortgages, title insurance, and State laws.

04.13 09 Real Estate Practice

The study of the day-to-day operations in real estate, including listing, prospecting, advertising, financing, sales techniques, escrow, and ethics.

04.13 99 Other Real Estate (Specify)

04.99 OTHER BUSINESS (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN BUSINESS, SEE APPENDIX E.

05 COMMUNICATION

Subject matter concerned with the creation, transmission, and evaluation of messages.

05.01 ADVERTISING

The study of the creation, execution, transmission, and evaluation of commercial messages concerned with the promotion and sale of products and services.

05.01 01 Advertising Evaluation

The study of the measurement of advertising messages using primary data, media research data, and surveys to determine the success of product or service functions in advertising campaigns.

05.01 02 Advertising Media

The study of the selection and implementation of the various vehicles for advertising messages, including the role of advertising agencies.

05.01 03 Advertising Production

The study of methods and application of concepts in producing and transmitting messages in advertising through print, electronic, direct mail media, and point of purchase situations.

05.01 04 Copywriting

The study of the techniques of reproducing written matter or art work in printed form for advertisements or publicity releases.

05.01 99 Other Advertising (Specify)

05.02 COMMUNICATION TECHNOLOGY

The study of the application of technology to communication.

05.02 01 Communication Networking

The study of the process of interconnecting communication equipment, often involving the geographic distribution of diverse communication systems.

05.02 02 Print Publication Technology

The study of optical scanning of copy and electronic editing methods used to eliminate errors and speed production in the newsroom.

05.02 03 Satellite Communication

The study of man-made celestial bodies that orbit the earth and their use in public and private communication.

05.02 99 Other Communication Technology (Specify)

05.03 FILM AS COMMUNICATION (See 03.02 – Film as Art)

The study of the historical development, aesthetic qualities, and creative process of the motion picture image as a narrative, documentary, or experimental form.

05.03 01 Film and Public Policy

The study of the laws and regulations governing motion pictures as a public medium.

05.03 02 Film in Education

The study of the nature, history, and use of the motion picture as an educational instrument.

05.03 03 Film Production

The study and exercise of the principles and techniques of creating motion pictures.

05.03 03 01 Acting in Film

The study of the principles and techniques used in performing the role of a living character before a motion picture camera.

05.03 03 02 Cinematography

The study and practice of reproducing images on motion picture film.

05.03 03 03 Directing for Film

The study and practice of planning, coordinating, and implementing scenes before a motion picture camera.

05.03 03 04 Editing for Film

The study and practice of selecting and arranging motion picture film footage to achieve a creative expression.

05.03 03 05 Film Graphics

The study and practice of creating motion pictures through the manipulation of inanimate materials.

05.03 03 06 Film Sound

The study and practice of recording, mixing, and joining sound to motion pictures.

05.03 03 07 Production Management in Film

The study and practice of organizing materials and personnel to achieve a complete motion picture.

05.03 03 08 Writing for Film

The study and practice of principles and techniques used in creating written material for motion picture film.

05.03 04 History of Film as Communication

The study of the evolution and development of the motion picture medium as a socioeconomic cultural phenomenon.

05.03 05 Theory and Criticism of Film as Communication

The study of the methods and standards for judging the quality of motion picture film and film making as an instrument of mass communication.

05.03 99 Other Film as Communication (Specify)

05.04 INNOVATIVE COMMUNICATION

The study of innovative forms of mass communication, including technical and science writing and nonprint media.

05.04 01 Nonprint Media

The study of the development and use of nonprint communication materials, forms, and media such as microfilm slides and audio and video tapes.

05.04 02 Technical Communication

The study of principles and methods used in oral or written exposition of scientific and technical materials.

05.04 99 Other Innovative Communication (Specify)

05.05 INTERNATIONAL COMMUNICATION

The study of the principles and methods of imparting or interchanging between countries thoughts, opinions, or information by speaking, writing, codes, and other means.

05.05 01 International Negotiations

The study of the acts or processes involved in communications which seek to settle or make arrangements or agreements suitable to countries or nation-states.

05.05 02 International Propaganda

The study of the communication employed by a nation in an effort to further its cause or to damage an opposing cause.

05.05 99 Other International Communication (Specify)

05.06 JOURNALISM

The study of the principles and methods of gathering, processing, evaluating, and disseminating, through mass media, information about current events and issues.

05.06 01 Editorial Processes

The study of principles and methods of selecting, processing, and evaluating news and editorial content in the mass media, particularly in the light of audience or readership needs and responses.

05.06 02 Critical and Persuasive Writing

The study of the principles and techniques which can be effectively employed in such written forms as editorials, reviews, and interpretive analyses for evaluative or persuasive purposes.

05.06 03 Electronic Journalism

The study of the principles and techniques of planning, creating, and transmitting informational or news-related messages through the electronic process, particularly by radio and television.

05.06 04 Evaluative Writing

The study of the methods of implementing the Fair Comment and Criticism provisions of the First Amendment through editorial writing and critical reviews of public performances.

05.06 05 Feature and Indepth Writing

The study of the principles and techniques of gathering and disseminating, through mass media, facts, opinions, and ideas which are primarily interesting, explanatory, or analytical.

05.06 06 Journalism History

The study of the beginnings, development, and changes which have occurred in the mass media, and the economic, political, social, and technical influences which have affected them.

05.06 07 Journalism Laboratory

The study of the methods, techniques, and theories of journalism, performed in a laboratory environment to simulate real-life conditions.

05.06 08 News Reporting and Writing

The study of the nature and importance of news and the methods for obtaining and preparing news for transmission through mass media.

05.06 09 Photographic Journalism

The study of the theory and processes of using sensitized film to create visual and informational images for the transmission of messages.

05.06 99 Other Journalism (Specify)

05.07 PRINT MEDIA

The study of the principles, techniques, and requirements of using the printed media in the communication process; including, but not restricted to, pamphlets, newspapers, periodicals, and books.

05.08 PROFESSIONAL PRACTICES IN COMMUNICATION

The study of the history and status of legal, ethical, and societal restraints on, and the guarantees for, the communicator.

05.09 PUBLIC RELATIONS

The study of planned efforts to influence and maintain favorable public opinion through acceptable performance, honestly presented, with reliance on two-way communication and substantial use of the mass media.

05.10 RADIO

The study of the history, theories, and functions of radio in reaching mass audiences.

05.10 01 Radio and Public Policy

The study of the laws and regulations governing radio broadcasting as a public medium.

05.10 02 Radio Production

The study and exercise of principles and techniques used in creating radio programs.

05.10 03 Radio Programing

The study of the principles and techniques used in developing formats for scheduling radio broadcasts and evaluating audience response.

05.10 04 Writing for Radio

The study and practice of the principles and techniques used in creating written materials for radio broadcast.

05.10 99 Other Radio (Specify)

05.11 SPEECH COMMUNICATION

The study of the nature, processes, and effects of human symbolic interaction.

05.11 01 Code Systems

The study of the uses of verbal and nonverbal symbols and signs in human communication.

05.11 02 Intercultural Communication

The study of communication among individuals of different cultural backgrounds.

05.11 03 Interpersonal Communication

The study of communicative interaction occurring in person-to-person and small group situations.

05.11 03 01 Conflict Management

The study of the role of communication in the creation and control of conflict.

05.11 04 Organizational Communication

The study of interrelated behaviors, technologies, and systems functioning within an organization.

05.11 05 Oral Interpretation

The study of literature through performance involving the development of skilled verbal and nonverbal expression based on critical analysis of written texts.

05.11 05 01 Aesthetics of Literature in Performance

The study of the philosophy of art as it applies to and enhances the performance and evaluation of literature.

05.11 05 02 Criticism of Literature in Performance

The study of the analysis and evaluation of literary texts in performance.

05.11 05 03 Group Performance

The study of modes of adaptation and oral presentation of a literary text by two or more persons including performances utilizing music, sound, dance, and other paralinguistic effects.

05.11 05 04 Oral Tradition

The study of the performance of various forms of verbal art in nonliterate and literate societies.

05.11 06 Pragmatic Communication

The study and practice of communication, the object of which is to influence or facilitate decision making.

05.11 06 01 Argumentation

The study of the processes involved in the development of ideas through reasoned discourse.

05.11 06 02 Debate and Forensics

The study of the application of forms of argument to test ideas or reach decisions.

05.11 06 03 Discussion and Conference

The study of the principles and procedures employed in problem-solving and decisionmaking groups.

05.11 06 04 Parliamentary Procedure

The study of codes and rules for the conduct of meetings or organizations in a democratic society, including, but not limited to, legislative bodies.

05.11 06 05 Persuasion

The study of the principles and strategies of communication that are intended to modify attitudes and actions.

05.11 07 Public Address

The study of speakers and speeches, including the historical and social context of platforms, campaigns, and movements.

05.11 08 Rhetorical and Communication Theory

The study of the principles that account for human communicative experiences and behavior.

05.11 08 01 Rhetorical Criticism

The study of the application of theoretical and evaluative principles to communicative experiences and behavior.

05.11 09 Speech Communication Education

The study of speech communication in pedagogical contexts.

05.11 09 01 Communication Development

The study of the acquisition and use of speech communication skills by normal children.

05.11 09 02 Oral Communication Skills

The study of strategies for improving individual competencies in speaking and listening.

05.11 09 03 Instructional Communication

The study of communicative factors involved in the teaching-learning process.

05.11 10 Speech and Hearing Science

The study of the physiological and acoustical correlates of speech and hearing behavior.

05.11 10 01 Biological Aspects of Speech and Hearing

The study of the anatomy and physiology of speech and hearing mechanisms.

05.11 10 02 Phonological and Phonetic Aspects of Speech and Hearing

The study of the production and perception of verbal and nonverbal human sounds.

05.11 10 03 Physical Aspects of Speech and Hearing

The study of acoustic characteristics of motor speech production and of auditory perception.

05.11 99 Other Speech Communication (Specify)

05.12 SPECIAL COMMUNICATION

The study of special communication needs and the systems designed to enhance communicative abilities for persons handicapped in one or more of the modes of communication.

05.12 01 Braille

The study of a system of raised dots for touch reading and writing by the blind, derived from an arrangement of six dots referred to as the braille cell.

05.12 02 Manual Communication

The study of communication by means of systematic use of signs and symbols, made with the hands and body, including various signed language systems and finger spelling to convey and receive information.

05.12 03 Speech Reading

The study of knowledge and skills designed to develop student competencies in understanding the speaker's message through visual attention.

05.12 99 Other Special Communication (Specify)

05.13 TELEVISION

The study of the history, theories, and functions of television in reaching mass audiences.

05.13 01 Community Television

The study of CATV systems, their cause and effect and legal implications in reaching the mass viewing audiences.

05.13 02 Television and Public Policy

The study of the laws and regulations governing television as a public medium.

05.13 03 Writing for Television

The study and practice of the principles and techniques of creating written material for television.

05.13 04 Television Production

The study and exercise of the principles and techniques of creating television programs.

05.13 05 Television Programing

The study of the principles and techniques of developing and scheduling television programs and of evaluating audience response.

05.13 99 Other Television (Specify)

05.99 OTHER COMMUNICATION (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN COMMUNICATION, SEE APPENDIX E.

06 COMPUTER SCIENCE AND DATA PROCESSING

Subject matter concerned with the coding, processing, and storage of data through repetitious and highly complex mathematical operations at high speed, and in accordance with strictly defined systems and procedures.

06.01 APPLICATIONS IN COMPUTER SCIENCE AND DATA PROCESSING

The study of the application of computer science and data processing to induction and hypothesis formulation, cognitive

and perceptual processes, learning and adaptive systems, problem solving, or simulation of natural systems.

06.01 01 Artificial Intelligence

The study of the execution by automatic means of procedures or operations associated with human intelligence including perception, recognition, organization, action, and assessment of impact.

06.01 02 Computer Graphics

The study of the input, construction, storage, retrieval, manipulation, alteration, and analysis of pictorial data.

06.01 03 Instructional Applications

The study of the use of computers for instructional purposes as in computer assisted instruction, computer managed instruction, computer based instruction, and test analysis.

06.01 04 Pattern Recognition

The study of the identification of shapes, forms, or configurations by means of computers as used in fingerprint analysis and character recognition.

06.01 99 Other Applications in Computer Science and Data Processing (Specify)

06.02 COMPUTER OPERATIONS AND OPERATIONS CONTROL

The study of the procedures necessary for managing, securing, and operating computer equipment and for processing data.

06.02 01 Computer Operation

The study of the physical tasks required to operate a computer and its related peripheral equipment.

06.02 02 Data Control

The study of techniques of managing the flow of input and output documents through a computer center.

06.02 03 Data Entry

The study of the techniques of converting original data to a machine readable form such as keypunching or other forms of data transcription.

06.02 04 Records Management

The study of techniques designed to provide economy and efficiency in the creation, organization, maintenance, use, and disposition of recorded data.

06.02 05 Unit Record Operation

The study of techniques of operating equipment that processes data recorded in punched cards such as card sorters, collators, and tabulators.

06.02 99 Other Computer Operations and Operations Control (Specify)

06.03 COMPUTER HARDWARE SYSTEMS

The study of the use of, and interrelationships between computers, input and output devices, data storage devices, control units, and related equipment.

06.03 01 Computer Architecture

The study of the techniques of design and assembly of computing logic units and devices into a computing system.

06.03 02 Networking

The study of the process of interconnecting computing equipment, often involving geographic distribution of user terminals and diverse computer systems.

06.03 03 Processing Modes

The study of distinct computing methods such as card-oriented batch processing, keyboard-oriented batch processing, remote job entry, time-sharing, interactive computing, on-line inquiry, and message switching.

06.03 99 Other Computer Hardware Systems (Specify)

06.04 COMPUTER HARDWARE

The study of the mechanical, magnetic, electrical, electronic, and other devices and components of computers and other data processing equipment.

06.04 01 Central Processing Units

The study of that part of a computing system which contains the circuits that control and perform the execution of instructions, usually containing the main storage and arithmetic and logic units.

06.04 02 Communication Control Devices

The study of message switching equipment, remote terminal controllers, concentrators, multiplexers, and other electronic message handling devices.

06.04 03 Memory Hierarchies

The study of the functional and performance characteristics of various storage media and their relationships within a computer system.

06.04 04 Microprocessors

The study of the architecture, logic, and program characteristics of central processing units which are implemented on single or, at most, very few large-scale integrated circuits.

06.04 05 Peripheral Devices

The study of various units and devices that usually are connected to and used in combination with a central processor

such as input and output devices and storage devices, including tape and disk drives, terminals, card readers and punches, printers, and plotters.

06.04 06 Unit Record Equipment

The study of equipment which processes data recorded in punched cards, including card sorters, collators, and tabulators.

06.04 99 Other Computer Hardware (Specify)

06.05 INFORMATION AND DATA BASE SYSTEMS

The study of methods for creating, organizing, storing, and accessing organized files of information.

06.05 01 Data Base Specifications

The study of the computer specifications and standardizations of data systems languages, such as through the Conference on Data Systems Languages (CODASYL).

06.05 02 Data Base Management Systems

The study of computer software systems which handle the storage, changing, and retrieval of records in an organized file.

06.05 03 Data Base Security

The study of the procedures required to protect data bases from unauthorized access, modification, or destruction.

06.05 04 File Organization and Manipulation

The study of procedures used for organizing data elements and files to develop optimum use of storage and ensure rapid retrieval such as sequential, random, and indexed access methods, and indexed file structures.

06.05 05 Generalized Report Techniques

The study of methods for developing software that processes specific words and symbols used to define any of a variety of report formats, resulting in the generation of computer instructions that produce the defined report, utilizing previously established data files.

06.05 06 Information Retrieval and Search Techniques

The study of methods for searching large files, usually bibliographies, for reference to key specification topics.

06.05 07 Sequential and Random Access Methods

The study of storage techniques in which the stored items of information become available only in a one-after-the-other sequence, whether or not all the information or only some of it is desired, and the study of the storage techniques which permit direct access to any stored item regardless of its position.

06.05 08 Relational Data Bases

The study of the relationships that are defined among various data record types.

06.05 99 Other Information and Data Base Systems (Specify)

06.06 NUMERICAL COMPUTATIONS

The study of methods for obtaining useful quantitative solutions to problems that have been expressed mathematically, including the study of the errors and bounds on errors in obtaining such solutions.

06.06 01 Computational Algorithms

The study of methods for achieving solutions to classes of numerical problems using the computer.

06.06 02 Computational Error Analysis

The study of the cause and effect of errors that result from computer arithmetic, rounding, or truncation.

06.06 03 Mathematical Software

The study of methods for producing reliable, portable, quality programs designed to solve classes of mathematical or numerical problems.

06.06 99 Other Numerical Computations (Specify)

06.07 PROGRAMING LANGUAGES

The study of different sets of symbols and the rules for combining them into instructions which can ultimately be used by a computer.

06.07 01 Command Languages

The study of the programing language which is recognized by the computer to make it operate.

06.07 02 Decision Tables Languages

The study of the programing language that is a part of a decision table programing system.

06.07 03 List Processing Languages

The study of specific languages developed for manipulation of symbols and strings of symbols such as LISP and SNOBOL.

06.07 04 Problem or Special Purpose Languages

The study of programming languages designed for a single objective, and programing languages which define, specify, and solve problems; such as RPG.

06.07 05 Procedure Oriented Languages

The study of programing languages that are particularly suited to the process of solving general problems; such as FORTRAN, BASIC, COBOL, and APL.

06.07 06 Simulation Languages

The study of programing languages that are designed for modeling specific kinds of systems; such as GASP, DYNAMO, and SIMSCRIPT.

06.07 07 Symbolic and Algebraic Manipulation Languages

The study of programing languages that are used for manipulating algebraic or symbolic expressions; such as ALTRAN and FORMAC.

06.07 08 Instructional Programing and Author Languages

The study of languages designed for programing computers to assist with instruction, often providing special features for authors of computer-based learning materials—such as COURSEWRITER, PLAN IT, and TUTOR.

06.07 99 Other Programing Languages (Specify)

06.08 PROGRAMING SYSTEMS

The study and design of programs, programing languages, and sets of coded instructions directing a computer to perform a series of operations.

06.08 01 Assemblers

The study of machine-dependent computer programs that translate structured symbolic statements into machine instructions.

06.08 02 Compilers

The study of computer programs that translate machine-dependent, structured, symbolic language statements into machine instructions.

06.08 03 Interpreters

The study of computer programs that translate structured symbolic statements for immediate statement-by-statement processing.

06.08 04 Job Control Languages

The study of computer programing languages which aid users of a specific data processing system to describe the requirements of a task, or series of tasks, to that system.

06.08 05 Macrolanguages

The study of computer programing languages that make use of sets of machine-language instructions to perform specific data processing functions by aggregation into simpler instructions (macros).

06.08 06 Operating Systems

The study of organized collections of techniques and procedures for allocating resources within a computer system.

06.08 07 Performance Measurement and Evaluation

The study of techniques for testing and comparing the performance of computer systems by the use of such techniques as benchmarking and simulation.

06.08 08 Systems Security

The study of computer programs designed to maintain the integrity of programing systems and to prevent unauthorized access or damage to such systems.

06.08 09 Virtual Memory Systems

The study of techniques that permit a computer user to treat secondary storage as an extension of main memory, thus giving the appearance of a larger memory system.

06.08 99 Other Programing Systems (Specify)

06.09 SOFTWARE METHODOLOGY

The study of the methods and techniques of designing and producing computer programs.

06.09 01 Coding and Testing

The study of methods of preparing in code, or pseudocode, a list of the successive computer operations (computer program) required to solve a specific problem, and techniques for verifying the correctness of the computer programs.

06.09 02 Documentation and Documentation Standards

The study of the procedures for providing a record of the function, data requirements, output, usage, and description of a computer program or system of programs, and the standards for such procedures.

06.09 03 Programing Techniques

The study of methods and procedures for the efficient development of well-structured programs, such as typically structured programing, modular programing, top-down programing.

06.09 04 Systems Analysis

The study of the principles and techniques involved in the design of large-scale computer programs including modeling, flowcharting, data organization, and the impact of the programs on organizational objectives.

06.09 05 Systems Design

The study of the procedures for generating detailed specifications of the steps outlined by a systems analyst.

06.09 06 Time, Cost, and Feasibility Studies

The study of procedures for estimating the length of time and the cost required to produce a computer program, such as the use of Program Evaluation Review Techniques (PERT) and other critical path methods.

06.09 99 Other Software Methodology (Specify)

06.10 THEORY OF COMPUTATION

The study of abstract mathematical models of computing machines.

06.10 01 Analysis of Algorithms

The study of algorithm complexity and problem complexity. The former is concerned with consideration of a specific algorithm for solving a problem and the analysis of its behavior with respect to the amount of memory and other resources used. The latter is concerned with the class of algorithms for solving a particular problem and the determination of the minimum requirements of the problem with respect to time, memory, or other resources.

06.10 02 Computability and Decidability

The study of conditions under which a given problem can be solved on a given abstract machine and the conditions under which it is possible to make such determinations.

06.10 03 Formal Languages

The study of abstract mathematical objects used to model the syntax of programing languages or of natural languages such as English.

06.10 04 Proof of Program Correctness

The study of mathematical techniques for providing that a given computer program actually solves a specific problem.

06.10 05 Theory of Automata

The study of the abstract mathematical models which are idealized machines called "automata", such as Turing machines.

06.10 99 Other Theory of Computation (Specify)

06.11 EDUCATIONAL, SOCIETAL, AND CULTURAL CONSIDERATIONS

The study of any aspects of computer science and data processing which impact education, society, and culture, such as legal implications, right to privacy, and computer theft.

06.11 01 Computer Literacy

The study of the nontechnical aspects of the capabilities and limitations of computers, including some of the social, cultural, vocational, economic, and educational implications of computers.

06.11 02 History of Computer Science and Data Processing

The study of the historical development of computers, of computer science, and data processing.

06.11 03 Basic Concepts of Computer Science

The study of basic concepts of computers, computer systems, programing, and programing systems.

06.11 04 Basic Concepts of Data Processing

The study of computers and computer programing, especially as they apply to the problems arising from business and commercial applications.

06.11 99 Other Educational, Societal, and Cultural Considerations (Specify)

06.99 OTHER COMPUTER SCIENCE AND DATA PROCESSING (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER IN COMPUTER SCIENCE AND DATA PROCESSING, SEE APPENDIX E.

07 EDUCATION

Subject matter concerned with the art or process of imparting knowledge, developing the powers of reasoning and judgment, and preparing others intellectually for a more mature life.

07.01 FOUNDATIONS OF EDUCATION

The study of the historical, psychological, sociological, philosophical, and comparative aspects of education, and of the basic concepts upon which American education is based.

07.01 01 Comparative Education

The study of similarities and differences between educational theory and practice in different countries and various cultures for the purpose of deepening understanding and solving educational problems.

07.01 02 Educational Theory

The study of the theoretical foundations of education, including historical, philosophical, political, and psychological perspectives.

07.01 03 Socioeconomic Foundations

The study of the impact and relationship between the economic aspects of society and education.

07 01 99 Other Foundations of Education (Specify)

07.02 EDUCATIONAL ADMINISTRATION

The study of principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling educational institutions and agencies.

07.02 01 Principles and Theory of Educational Administration

The study of the basic theories and principles of organizing, managing, developing, staffing, and financial educational institutions and agencies.

07.02 02 Educational Business Management

The study of the principles and techniques of applying business management principles and methods to organizing, planning, and controlling the daily operations of an educational institution or agency, including factors related to personnel, facilities, and finances.

07.02 03 Educational Facilities and Materiel

The study of the principles and practices of planning, organizing, staffing, maintaining, purchasing, coordinating, and managing the physical plant and equipment of educational institutions and agencies.

07.02 04 Educational Finance

The study of the principles and practices of obtaining and allocating educational finances, of evaluating local, State, and Federal education finance systems, and of analyzing foundation aid formulas and procedures for the disbursement of educational monies.

07.02 05 Educational Leadership and Management

The study of the theories, methods, principles, and practices of directing, controlling, and administering the personnel resources of educational institutions and agencies.

07.02 06 Educational Organization and Governance

The study of the theories, methods, principles, and practices of organizing and governing the constellation of informal and formal activities that characterize educational institutions and agencies.

07.02 07 Educational Personnel and Staffing

The study of the principles and practices of interviewing, selecting, motivating, compensating, and terminating the professional and support personnel of educational institutions and agencies.

07.02 08 Educational Planning

The study of the theories, methods, and techniques for making judgments and predictions about the future of educational institutions and agencies.

07.02 09 Student Personnel Administration

The study of the principles and techniques of managing, directing, and developing an organized unit providing student services within an educational institution.

07.02 99 Other Educational Administration (Specify)

07.03 SYSTEMS OF EDUCATION

The study of the historical, theoretical, social, and economic principles upon which designated plans, methods, and structures for providing instruction are established and maintained.

07.03 01 Preelementary Education Systems

The study of the historical, theoretical, social, and economic principles upon which designated preelementary education systems are established and maintained.

07.03 02 Elementary Education Systems

The study of the historical, theoretical, social, and economic principles upon which designated elementary education systems are established and maintained.

07.03 03 Secondary Education Systems

The study of the historical, theoretical, social, and economic principles upon which designated secondary education systems are established and maintained.

07.03 04 Middle School Education Systems

The study of the historical, theoretical, social, and economic principles upon which designated middle school education systems are established and maintained.

07.03 05 Community and Junior College Education Systems

The study of the historical, theoretical, social, and economic principles upon which designated community and junior college education systems are established and maintained.

07.03 06 Vocational-Technical Education Systems

The study of the historical, theoretical, social, and economic principles upon which designated vocational-technical education systems are established and maintained.

07.03 07 Higher Education Systems

The study of the historical, theoretical, social, and economic principles upon which designated higher education systems are established and maintained.

07.03 08 Parochial Education Systems

The study of the historical, theoretical, social, and economic principles upon which designated parochial or religious education systems are established and maintained.

07.03 09 Adult-Continuing Education Systems

The study of the historical, theoretical, social, and economic principles upon which designated adult and continuing education systems are established and maintained to meet the unique needs of adults and youth who are beyond the age of compulsory school attendance and who have either completed or interrupted their formal education.

07.03 99 Other Systems of Education (Specify)

07.04 CURRICULUM AND INSTRUCTION – GENERAL

The study of the theories, methods, and procedures for designing, controlling, developing, and integrating educational activities and programs.

07.04 01 Principles and Theories of Curriculum and Instruction

The study of the principles and theories of designing, developing, integrating, and controlling curriculum and instruction.

07.04 02 Management and Supervision of Curriculum and Instruction

The study of the principles and practices of administering, controlling, and directing the development and implementation of curriculum instructional activities and programs.

07.04 03 Teacher Training

The study of the principles and techniques of preparing teachers to perform instructional activities, including the activities of practice teaching.

07.04 04 Teaching Methods

The study of the development and use of alternative ways of providing instructional activities to students.

07.04 99 Other Curriculum and Instruction – General (Specify)

07.05 CURRICULUM AND INSTRUCTION – SUBJECT MATTER

The study of the theory, methods, and techniques involved in teaching specific subject matter (Using the Structure of the Classification of Educational Subject Matter).

07.05 01 Agriculture and Renewable Natural Resources

The study of the theory, methods, and techniques involved in teaching the subject matter of Agriculture and Renewable Natural Resources.

07.05 02 Architecture and Environmental Design

The study of the theory, methods, and techniques involved in teaching the subject matter of Architecture and Environmental Design.

07.05 03 Arts, Visual and Performing

The study of the theory, methods, and techniques involved in teaching the subject matter of Arts, Visual and Performing.

07.05 04 Business

The study of the theory, methods, and techniques involved in teaching the subject matter of Business.

07.05 05 Communication

The study of the theory, methods, and techniques involved in teaching the subject matter of Communication.

07.05 06 Computer Science and Data Processing

The study of the theory, methods, and techniques involved in teaching the subject matter of Computer Science and Data Processing.

07.05 07 Education

The study of the theory, methods, and techniques involved in teaching the subject matter of Education.

07.05 08 Engineering and Engineering Technology

The study of the theory, methods, and techniques involved in teaching the subject matter of Engineering and Engineering Technology.

07.05 09 Health Care and Health Sciences

The study of the theory, methods, and techniques involved in teaching the subject matter of Health Care and Health Sciences.

07.05 10 Home Economics

The study of the theory, methods, and techniques involved in teaching the subject matter of Home Economics.

07.05 11 Industrial Arts, Trades, and Technology

The study of the theory, methods, and techniques involved in teaching the subject matter of Industrial Arts, Trades, and Technology.

07.05 12 Language, Linguistics, and Literature

The study of the theory, methods, and techniques involved in teaching the subject matter of Language, Linguistics, and Literature.

07.05 13 Law

The study of the theory, methods, and techniques involved in teaching the subject matter of Law.

07.05 14 Libraries and Museums

The study of the theory, methods, and techniques involved in teaching the subject matter of Libraries and Museums.

07.05 15 Life Sciences and Physical Sciences

The study of the theory, methods, and techniques involved in teaching the subject matter of Life Sciences and Physical Sciences.

07.05 16 Mathematical Sciences

The study of the theory, methods, and techniques involved in teaching the subject matter of Mathematical Sciences.

07.05 17 Military Sciences

The study of the theory, methods, and techniques involved in teaching the subject matter of Military Sciences.

07.05 18 Philosophy, Religion, and Theology

The study of the theory, methods, and techniques involved in teaching the subject matter of Philosophy, Religion, and Theology.

07.05 19 Physical Education, Health Education, and Leisure

The study of the theory, methods, and techniques involved in teaching the subject matter of Physical Education, Health Education, and Leisure.

07.05 20 Psychology

The study of the theory, methods, and techniques involved in teaching the subject matter of Psychology.

07.05 21 Public Administration and Social Services

The study of the theory, methods, and techniques involved in teaching the subject matter of Public Administration and Social Services.

07.05 22 Social Sciences and Social Studies

The study of the theory, methods, and techniques involved in teaching the subject matter of Social Sciences and Social Studies.

07.05 99 Other Curriculum and Instruction – Subject Matter (Specify)

07.06 CURRICULUM AND INSTRUCTION – PROGRAMS

The study of the theory, methods, and techniques of designing, implementing, and evaluating instructional programs, or programs of interrelated activities in an educational setting.

07.06 01 Agricultural Occupations

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, and retrain students in agricultural occupations.

07.06 02 Career Education

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which provide assistance to students in planning and preparing for a career.

07.06 03 Cooperative Education

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which provide students with on-the-job training and coordinated school instruction.

07.06 04 Distributive Education

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which provide students with various combinations of subject matter and learning experiences related to the flow of goods and services from the producer to the consumer or ultimate user.

07.06 05 Health Occupations

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, and retrain students in a wide range of health maintenance and health care occupations.

07.06 06 Home Economics Occupations

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, and retrain students for occupations requiring the knowledge and skills of home economics subject matter.

07.06 07 Office Occupations

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, and retrain students in selected office occupations.

07.06 08 Technical Education

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students for a cluster of job opportunities in specialized, technical fields or occupations.

07.06 09 Trade and Industrial Occupations

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students in a wide range of trade and industrial occupations.

07.06 10 Reading and Language Arts Programs

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students in reading and the language arts.

07.06 11 Bilingual Education Programs

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students in English and another language which may be their native tongue.

07.06 12 Cocurricular Activity Programs

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which are under the sponsorship of a school, but for which participation is generally not required and credit is generally not awarded.

07.06 13 Driver Education Programs

The study of the theory, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students in the skills and learning experiences necessary for the safe operation of a motor vehicle.

07.06 99 Other Curriculum and Instruction – Programs (Specify)

07.07 COUNSELING AND GUIDANCE

The study of the theory, methods, functions, operations, and services involved in the personal, social, educational, and vocational development of students.

07.07 01 Principles and Theories of Counseling and Guidance

The study of the principles, theories, and methods of serving the personal, social, educational, and vocational needs of students.

07.07 02 Academic Counseling and Guidance

The study of the theory, methods, functions, operations, and services that are provided to students who seek assistance in making specific choices regarding their educational progress towards a career.

07.07 03 Career Information and Counseling

The study of the theory, methods, functions, operations, and services that are provided to students who seek assistance in selecting and pursuing a career.

07.07 04 Clinical Experience

The study of the principles and techniques of applying counseling and guidance theories, methods, functions, operations, and services to student clients in educational settings.

07.07 05 Counseling Services

The study of the nature and characteristics of programs, operations, and services that are provided to students in educational institutions and other agencies for the purpose of helping them to direct their judgment or conduct.

07.07 06 Group Processes and Procedures

The study of the theories, methods, and techniques for leading, organizing, and conducting counseling activities that involve several student clients at the same time.

07.07 07 Organization and Administration of Counseling and Guidance

The study of the principles and techniques of structuring, managing, directing, and controlling organizations, institutions, agencies, and departments that provide counseling and guidance services.

07.07 08 Professional Development

The study of principles and techniques of providing continuing education experiences to further professional growth in counseling and guidance personnel.

07.07 99 Other Counseling and Guidance (Specify)

07.08 SPECIAL EDUCATION

The study of the theory, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose physical, emotional, mental, or social needs require a special curriculum and educational setting.

07.08 01 Early Education of the Handicapped

The study of the theory, methods, and techniques of designing, implementing, and evaluating organized learning activities for handicapped students whose ages range from birth to the time a child would normally complete the third grade.

07.08 02 Emotionally Handicapped

The study of the theory, methods, and techniques of designing, implementing, and evaluating organized learning activities for students exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance: (a) an inability to learn which cannot be explained by intellectual, sensory or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; or (e) a tendency to develop physical symptoms or fears associated with personal or school problems. This category includes children who are schizophrenic or autistic. This category does not include children who are socially maladjusted, unless it is determined that they are emotionally disturbed.

07.08 03 Gifted and Talented

The study of the theory, methods, and techniques for designing, implementing, and evaluating organized learning activities for students capable of high performance, including those with demonstrated achievement or ability in any one or more of these areas—general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, or psychomotor ability.

07.08 04 Hearing Handicapped

The study of the theory, methods, and techniques of designing, implementing, and evaluating organized learning activities for students who have an impairment in hearing, as follows: (a) "deaf" means a hearing impairment which is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance; (b) "hard of hearing" means a hearing impairment, whether permanent or fluctuating, which affects a child's educational performance but which is not included under the definition of "deaf" in this section.

07.08 05 Learning Disabled

The study of the theory, methods, and techniques of designing, implementing, and evaluating organized learning activities for students who have disorders in one or more of the basic psychological processes involved in understanding or in the use of language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, spell, or to do mathematical calculations. This category includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. This category does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural or economic disadvantage.

07.08 06 Mentally Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organized learning activities for students whose impaired mental development adversely affects their educational performance.

07.08 07 Multiple Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organized learning activities for students who have a combination of handicaps that adversely affects their educational performance.

07.08 08 Physically Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organized learning activities for students who have severe physical impairments which adversely affect their educational performance.

07.08 09 Severely Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organized learning activities for students who, because of the intensity of their physical, mental, or emotional problems, or a combination of such problems, need educational, social, psychological and medical services beyond those which are traditionally offered by regular and special educational programs in order to maximize their full potential for useful and meaningful participation in society.

07.08 10 Socially Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organized learning activities for students whose behavior may be in conflict with norms of home, school, or community but is not in conflict with subgroup norms and is not related to personal distress.

07.08 11 Speech Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organized learning activities for students who have a speech impairment or a language impairment which adversely affects their educational performance.

07.08 12 Visually Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organized learning activities for students who have a visual impairment which adversely affects their educational performance.

07.08 99 Other Special Education (Specify)

07.09 COMMUNITY SERVICE

The study of the theory, methods, and techniques of combining school and community resources to provide information, instruction, and recreation to all members of a community.

07.09 01 Communication and Dissemination

The study of the theory, methods, and techniques of utilizing available media to disseminate information about educational activities throughout the community.

07.09 02 Community Relations

The study of the theory, methods, and techniques of communicating information about school activities to parents and members of the community for the purpose of maintaining positive and mutually beneficial relationships.

07.09 03 Community Facilities and Activities

The study of the principles and techniques involved in planning, supervising, and utilizing the school plant for community

activities and programs which usually take place outside the normal school day.

07.09 99 Other Community Service (Specify)

07.10 EDUCATIONAL DEVELOPMENT

The study of the theory, methods, and techniques of evaluating and implementing change processes into the organization, programs, personnel, operations, and activities of educational systems.

07.10 01 Experimentation and Innovation

The study of the theory, methods, and techniques of critically evaluating new ideas, technology, and systems to be applied for the intended improvement of education.

07.10 02 Staff Development

The study of the principles, methods, and techniques of providing professional and personal growth in an educational environment.

07.10 99 Other Educational Development (Specify)

07.11 EDUCATIONAL EVALUATION AND RESEARCH

The study of the principles and procedures of searching for new knowledge and providing information about educational programs, personnel, methods, and theories.

07.11 01 Design and Planning

The study of the principles and procedures of putting together a systematic plan for educational change and action.

07.11 02 Methodology

The study of the principles, procedures, and techniques of conducting educational evaluation and research.

07.11 03 Principles and Theory of Evaluation and Research

The study of the theories, issues, and principles of conducting investigations, finding new knowledge, and developing methods of evaluation and research.

07.11 99 Other Educational Evaluation and Research

07.12 EDUCATIONAL TECHNOLOGY AND MEDIA

The study of the design, construction, operation, and maintenance of various mechanical and electronic devices, tools, and applications that are intended to contribute to the educational process.

07.12 01 Computer Applications to Education

The study of the principles and techniques by which educational activities such as data processing, research, instruction, and library services may be served through the application of computer technology.

07.12 02 Instructional Systems Design

The study of the principles and techniques involved in building instructional programs through the systematic use of available technology and instructional methods.

07.12 03 Educational Media and Material Production

The study of the principles and techniques of applying various forms of media to the process of instruction and to the production of educational materials.

07.12 04 Educational Media and Resource Centers

The study of the principles and techniques of establishing, operating, and maintaining centers of instructional support, including intermediate learning centers, learning resource centers, and libraries.

07.12 05 Television Applications to Education

The study of the principles and techniques of applying the technology of television to such educational processes as instruction, administration, and evaluation.

07.12 99 Other Educational Technology and Media (Specify)

07.99 OTHER EDUCATION (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN EDUCATION, SEE APPENDIX E.

08 ENGINEERING AND ENGINEERING TECHNOLOGY

Subject matter aimed at preparation for the practice of Engineering – the profession in which knowledge of the mathematical and natural sciences is gained by study, experience, and practice and is applied with judgment to develop ways to economically utilize the materials and forces of nature for the benefit of mankind; and Engineering Technology – that part of the technological field which requires the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities and which lies in the occupational spectrum between the craftsman and the engineer.

08.01 AEROSPACE AND AERONAUTICAL ENGINEERING AND TECHNOLOGY

The study of the design, construction, operation, and maintenance of aircraft, space vehicles, and power units, and to the

special problems of flight in both the earth's atmosphere and space, including the flight of air vehicles and the launching, guidance, and control of missiles, earth satellites, and space vehicles and probes.

08.01 01 Aerodynamics

The study of the motion of air and other gaseous fluids and the forces acting on bodies when they move through such fluids, or when such fluids move against or around the bodies.

08.01 02 Aeronautics

The study of the structure and flight of aircraft.

08.01 03 Astronautics

The study of spacecraft thrust systems such as propulsion, launching, orbiting, and rendezvous; spaceflight; solar-system destinations; and biological effects that travel in space has on man or other organisms.

08.01 04 Air Frame Structures

The study of the techniques of constructing an airplane, spacecraft, or missile, including the fuselage, wings, empennage, nacelle, and landing gear, but not power plants, furnishings, or equipment.

08.01 05 Ground and Air Support

The study of the construction, operation, and use of flight maintenance vehicles and support units.

08.01 06 Vehicle Guidance

The study of the control devices used in guidance of an aircraft or spacecraft and of the apparatus which generates and detects the path along which a vehicle or craft is often remotely and automatically guided.

08.01 99 Other Aerospace and Aeronautical Engineering and Technology (Specify)

08.02 AGRICULTURAL ENGINEERING AND TECHNOLOGY

The study of the design, construction, operation, and maintenance of equipment, structures, machinery, and energy devices for the purpose of improving the production of food and fiber.

08.02 01 Agricultural Energy and Power

The study of the principles and techniques for making effective use of energy such as electricity and wind on farms, ranches, and other agricultural establishments, including the development, maintenance, and operation of energy and power equipment.

08.02 02 Farm Machinery

The study of the principles and techniques involved in the production, selection, operation, and maintenance of agricultural machinery and equipment.

08.02 03 Farm Structures

The study of the principles and techniques of planning, designing, fabricating, and maintaining farm and other agricultural buildings.

08.02 04 Food Processing Machinery

The study of the principles and techniques involved in the production, selection, operating, and maintenance of machinery used in gathering, treating, packaging, and distributing agricultural products.

08.02 05 Soil and Water Resources

The study of the principles and techniques involved in the artificial application of water to arable land for agricultural use, maintenance of soil fertility, and utilization of water resources.

08.02 99 Other Agricultural Engineering and Technology (Specify)

08.03 ARCHITECTURAL ENGINEERING AND TECHNOLOGY

The study of the design and application of materials, components, and structural systems for buildings, including environmental control equipment.

08.03 01 Building Construction

The study of the application of engineering and architectural knowledge to the design and construction of building structures with attention given to economics and organizational control.

08.03 02 Building Equipment

The study of the design, installation, and maintenance of electrical and mechanical equipment for environmental control and movement within buildings.

08.03 99 Other Architectural Engineering and Technology (Specify)

08.04 AUTOMOTIVE ENGINEERING AND TECHNOLOGY

The study of the techniques of designing and producing land transportation vehicles such as automobiles, trucks, and tracked units.

08.05 BIOENGINEERING AND TECHNOLOGY

The study of the application of engineering and technological concepts, principles, and practices to human and other living systems.

08.05 01 Biochemistry (See 15.04 03 – Biochemistry)

The study of the chemical composition and processes of living matter and biological phenomena.

08.05 02 Biomaterials

The study of the physical properties of materials related to living matter and biological phenomena.

08.05 03 Biomechanics (See 19.02 01 – Biomechanics)

The study of the mechanics of living things.

08.05 04 Biomedical Systems

The study of the interrelation of the elements of biology, medical technology, and life support systems.

08.05 05 Biophysics (See 15.07 03 – Biophysics)

The study of the relationship between the physical principles and methods of the structures of living organisms and the mechanics of life processes.

08.05 99 Other Bioengineering and Technology (Specify)

08.06 CHEMICAL ENGINEERING AND TECHNOLOGY

The study of the nature of chemical processes, heat and mass transfer, the handling and treatment of liquids and gases, and physical and physical-chemical operations.

08.06 01 Polymers

The study of the nature and development of substances made of giant molecules that are formed by the union of simple molecules.

08.06 02 Process Control and Simulation

The study of the principles and techniques of forcing change in chemical-physical properties and imitating chemical reactions and processes.

08.06 03 Thermodynamics and Kinetics

The study of the principles and application of the chemical aspects of heat and mechanical changes in physical systems.

08.06 04 Unit Operations

The study of the principles and techniques of purifying and separating petroleum, ores, or chemical mixtures into their component parts.

08.06 05 Transport Phenomena

The study of the principles of heat, mass, momentum, and energy transport or transfer.

08.06 99 Other Chemical Engineering and Technology (Specify)

08.07 CIVIL ENGINEERING AND TECHNOLOGY

The study of the conception, analysis, design, testing, construction, and operation of structures, transportation components and systems, water resource and conveyance systems, pollution control systems, water treatment systems, and appurtenant works.

08.07 01 Construction Engineering

The study of the techniques of planning, executing, and controlling construction operations for such projects as highways, dams, buildings, and other heavy structures.

08.07 02 Highway Engineering

The study of the techniques of surveying, laying out routes, testing roadway materials, recommending alternate locations, and preparing plans and specifications for the construction of highways.

08.07 03 Hydrology (See 15.05 02 – Hydrology)

The study of the occurrence, circulation, distribution, and properties of the waters of the earth, and their reaction with the environment.

08.07 04 Materials of Construction

The study of the characteristics, properties, and use of various substances in the construction of civil engineering projects.

08.07 05 Sanitation Engineering

The study of the techniques and methods of protecting and promoting public health through water purification and sewage treatment.

08.07 06 Soil Mechanics and Foundations

The study of the application of the laws of solid and fluid mechanics to soils and similar granular materials as a basis for the design, construction, and maintenance of stable foundations and earth structures.

08.07 07 Structural Engineering

The study of techniques of structural analysis, design, and synthesis of materials such as reinforced concrete.

08.07 08 Transportation Engineering

The study of the movement of goods and people utilizing highways, water, rails, subways, and pipelines, including traffic regulations and safety.

08.07 99 Other Civil Engineering and Technology (Specify)

08.08 COMPUTER ENGINEERING AND TECHNOLOGY

The study of the principles and techniques of designing and producing the mechanical, magnetic, electrical, and electronic elements of computer hardware and supporting systems.

08.09 ELECTRICAL ENGINEERING AND TECHNOLOGY

The study of the theory and applications of electrical and electronic systems and their components, including circuits, electromagnetic fields, and energy sources.

08.09 01 Electromechanical Circuits

The study of lumped and distributed linear and nonlinear electrical parameters and their behavior.

08.09 02 Electromechanical Controls

The study of output and feedback components and their characteristics and applications in open-loop and closed-loop systems.

08.09 03 Electronics

The study of the control and application of the conduction of electricity through gases, or vacuum, or through semiconducting or conducting materials.

08.09 04 Fields and Waves

The study of the characteristics and application of electromagnetic systems related to energy and information processing.

08.09 05 Electronic Information Theory

The study of the nature and characteristics of signals and noise as related to electronic communication systems.

08.09 06 Electrical Instrumentation

The study of the design, manufacture, and utilization of devices and systems for detection, observation, measurement, display control, computation, communication, or data processing.

08.09 07 Power and Energy

The study of the generation, transmission, and distribution of power and energy and of the utilization of electrical power and energy devices and systems.

08.09 99 Other Electrical Engineering and Technology (Specify)

08.10 GRAPHICS AND DRAFTING FOR ENGINEERING AND TECHNOLOGY

The study of the communication of ideas through lines, symbols, drawings, and other graphical tools utilizing descriptive geometry, graphical analysis, and nomography, including details associated with equipment, dimensioning, and tolerances.

08.11 ENGINEERING MECHANICS

The study of the theory and practical application of the action of forces on bodies, with motion, and with statics, kinematics, and kinetics.

08.11 01 Continuum Mechanics

The study of the mathematical representation of the elastic and plastic actions of physical systems under forces.

08.11 02 Fluid Mechanics

The study of fluids at rest and in motion, and with velocities and accelerations in the fluid, including compression or expansion.

08.11 03 Solid Mechanics

The study of structural components and devices that predict and control the behavior of solid physical systems under actions of stress.

08.11 04 Statics and Dynamics

The study of the predictive theory of the behavior and control of physical systems and devices under actions of forces.

08.11 99 Other Engineering Mechanics (Specify)

08.12 ENGINEERING SCIENCE

The study of the usefulness of the knowledge of such subject matter as physics, chemistry, biology, and mathematics in engineering.

08.13 ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

The study of the techniques of identification and reduction of pollution, contamination, and deterioration of the natural environment, including the methodology for corrective action.

08.13 01 Air Pollution Control

The study of the practical means of identifying and treating polluting sources in order to maintain a desired degree of air quality.

08.13 02 Noise Pollution Control

The study of the practical means of identifying and treating noise pollution sources to minimize noise levels.

08.13 03 Solid Waste Control

The study of the practical means of aggregation, collection, treatment, and disposal of debris from natural and manmade processes.

08.13 04 Water and Sewage Control

The study of the identification and treatment of the sources of pollution of water such as sewage and industrial wastes so as to meet established standards for a desired environment.

08.13 99 Other Environmental Engineering Technology (Specify)

08.14 GEOLOGICAL ENGINEERING

The study and practical application of scientific principles related to the physical history of the earth, the rocks and soils of which it is composed, and the physical changes in its structure.

08.15 INDUSTRIAL ENGINEERING AND TECHNOLOGY

The study of the organization of integrated systems of people, materials, and equipment for the purpose of improving production processes.

08.15 01 Facilities Layout

The study of the techniques of conceiving and planning production facilities and processes, including the structural and parametric values of the system.

08.15 02 Human Factors in Industry

The study of the response characteristics of the human mind and body, and the influence of those characteristics on the interaction of people and machines.

08.15 03 Operations Research (See 04.12 03 – Operations Research)

The study of the application of mathematical modeling and feedback control theory to the interactions which occur in processes involving people, machines, and organizations.

08.15 04 Production Planning and Control

The study of the techniques and systems used to predict production schedules and completions, and to measure and maintain control over the processes of production.

08.15 05 Quality Assurance

The study of the testing and inspection of all, or a portion of, the final product, to insure that desired product quality reaches the customer.

08.15 06 Work Measurement

The study of the techniques of creating, describing, and measuring the integrated duties, skills, knowledge, and responsibilities assigned to an employee or employees in a work setting.

08.15 99 Other Industrial Engineering and Technology (Specify)

08.16 INSTRUMENTATION ENGINEERING AND TECHNOLOGY

The study of the techniques of designing, manufacturing, and utilizing display devices and systems for detection, observation, measurement, control, computation, communication, or data processing.

08.17 MANUFACTURING ENGINEERING AND TECHNOLOGY

The study of the design, construction, and application of machinery, tools, and processes used in manufacturing.

08.17 01 Manufacturing Processes

The study of the design, construction, and application of machinery and techniques in a continuous and predetermined manner for the creation of products.

08.17 02 Materials Handling

The study of the processes and equipment used in handling manufacturing materials with emphasis on mechanization and automation.

08.17 03 Packaging Engineering

The study of the techniques of providing protection for an article or group of articles against damage during shipment or storage.

08.17 04 Production Engineering

The study of the application of planning and optimization techniques to the processes and devices used in the production of goods and services.

08.17 05 Tool Engineering

The study of the design, production, and integration of machines, machine tools, and special dies, jigs, and instruments used in manufacturing.

08.17 99 Other Manufacturing Engineering and Technology (Specify)

08.18 MARINE ENGINEERING AND NAVAL ARCHITECTURE

The study of the principles and techniques of design, construction, installation, maintenance, and operation of vehicles and equipment operating on or in the water.

08.18 01 Marine Equipment

The study of the principles and techniques of designing, producing, and maintaining equipment that is intended for use in a marine environment.

08.18 02 Navigation

The study of the principles and technology involved in directing the movement of a watercraft so that it will reach its intended destinations, including position fixing, dead reckoning, pilotage, and homing.

08.18 03 Marine Propulsion

The study of the design, production, operation, and maintenance of engines and related equipment used in powering watercraft.

08.18 04 Ship Structures

The study of the structural characteristics of ships, including such elements as strength, flexibility, access, and capacity.

08.18 05 Underwater Techniques

The study of the special characteristics of marine equipment and processes that are used in underwater operations.

08.18 99 Other Marine Engineering and Naval Architecture (Specify)

08.19 MATERIALS ENGINEERING AND TECHNOLOGY

The study of the structure, reactions, functions, and synthesis of metals, ceramics, plastics, textiles, pulp and paper, wood, and other materials, including the effects of their properties on systems and objects that are constructed from the specified materials.

08.19 01 Ceramics Engineering and Technology

The study of techniques of designing, developing, and controlling processes that are involved in the manufacture of clay and ceramic-ware, porcelain, china, pottery, and related substances.

08.19 02 Metals Engineering and Technology

The study of the structure, reactions, functions, properties, and synthesis of metals and alloys.

08.19 03 Paper and Pulp Engineering and Technology

The study of the structure, reactions, functions, properties, and synthesis of paper and pulp.

08.19 04 Plastics Engineering and Technology

The study of the structure, reactions, functions, properties, and synthesis of polymeric materials.

08.19 05 Textiles Engineering and Technology

The study of the structure, reactions, functions, properties, and synthesis of textiles.

08.19 99 Other Materials Engineering and Technology (Specify)

08.20 MECHANICAL ENGINEERING AND TECHNOLOGY

The study of the design, construction, maintenance, and operation of mechanical products and related systems, including production machinery, energy conversion devices, and vehicles.

08.20 01 Air Conditioning, Heating, Ventilation, and Refrigeration Engineering

The study of the design, development, manufacture, and maintenance of equipment which uses processes to control and adjust temperature, humidity, and air circulation.

08.20 02 Automatic Control

The study of the techniques of controlling equipment by the use of preset or feedback methods in order to receive a desired equipment performance.

08.20 03 Energy Conversion

The study of processes by which energy is transformed into useful work, including steam engineering, fuel and combustion analysis, steam and gas turbines, industrial power plant equipment, and internal combustion engines.

08.20 04 Fluid Power

The study of hydraulics and pneumatics, including power conversion, transmission, utilization, and control in both stationary and mobile installations.

08.20 05 Manufacturing Processes

The study of the design, construction, and application of machinery and techniques in a continuous and predetermined manner for the creation of products.

08.20 06 Mechanical Design

The study of the design, development, manufacture, and maintenance of mechanical and other equipment as required for complete machine performance.

08.20 07 Power Engineering

The study of the generation, transmission, and utilization of energy, including the theory, maintenance, and servicing of machines and devices for the conversion of energy into useful forms.

08.20 08 Thermal and Fluid Sciences

The study of the properties of heat and fluids and the use of these properties to secure optimum performance in equipment and processes.

08.20 99 Other Mechanical Engineering and Technology (Specify)

08.21 METALLURGICAL ENGINEERING AND TECHNOLOGY

The study of the development and control of processes for extraction of metals from their ores and metal refining, the properties of metals and alloys, and the manufacturing and processing of metals.

08.21 01 Engineering Welding

The study of the principles and techniques involved in joining two ferrous and nonferrous metals and alloys by applying heat to melt and fuse them.

08.21 02 Extraction Metallurgy

The study of the techniques of extracting metals from their ores by various chemical, mechanical, and other methods.

08.21 03 Metal Forming

The study of the techniques of shaping metals by means of casting, extrusion, and stamping.

08.21 04 Physical Metallurgy

The study of the crystals, micro-structure, and properties of ferrous and nonferrous metals and alloys.

08.21 99 Other Metallurgical Engineering and Technology (Specify)

08.22 MINING ENGINEERING AND TECHNOLOGY

The study of the techniques and procedures for locating and appraising mineral deposits, and for designing the equipment and the operating processes for extracting minerals.

08.22 01 Mineral Dressing

The study of the techniques of improving the chemical or physical properties of an ore so that metal or other valuable material can be recovered at a profit.

08.22 02 Mineral Exploration

The study of the techniques and methods involved in locating and appraising of mineral deposits.

08.22 03 Mineral Processing

The study of the design, operation, and maintenance of equipment for enriching ores to the endproduct stage.

08.22 99 Other Mining Engineering and Technology (Specify)

08.23 NUCLEAR ENGINEERING AND TECHNOLOGY

The study of the design, development, manufacture, construction, installation, maintenance, and repair of mechanical plants and equipment for the release, control, and utilization of nuclear energy.

08.23 01 Fuel Separation and Reprocessing

The study of the techniques of separating isotopes and removing poisons from fissionable materials.

08.23 02 Nuclear Instrumentation

The study of the design and construction of instruments for detection, observation, measurement, and automatic control of nuclear processes

08.23 03 Radiation Control

The study of the methods, procedures, and techniques for maintaining a safe level of radiation, external to the reactor, by making use of a comparison with a standard.

08.23 04 Radiation Damage

The study of the effects of nuclear bombardment of materials within reactors.

08.23 05 Reactor Engineering

The study of the characteristics and arrangement of devices containing fissionable material in sufficient quantity as to be capable of maintaining a controlled, self-sustaining nuclear fission chain reaction.

08.23 06 Reactor Operation

The study of the techniques necessary to ensure efficient and safe operation of reactors, at the same time achieving maximum flux and output.

08.23 99 Other Nuclear Engineering and Technology (Specify)

08.24 OCEAN ENGINEERING

The study of wave action upon sea structures, equipment, and materials, including the development of instrumentation to determine the forces and accelerations of such action.

08.25 PETROLEUM ENGINEERING

The study of the processes of recovering and refining crude oil and gas, including the design, development, construction, installation, maintenance, and repair of related physical facilities.

08.25 01 Petroleum Exploration

The study of the techniques involved in discovering oil or gas from petroleum reserves.

08.25 02 Petroleum Refining

The study of the techniques of obtaining usable fractions through the processing of complex crude oils.

08.25 99 Other Petroleum Engineering (Specify)

08.26 SURVEYING AND MAPPING

The study of the determination and identification of the shape, contour, location, and dimensions of land or water and their features.

08.26 01 Land Surveying and Subdivision

The study of the techniques of measuring land and its features and the utilization of land, including planning, layout, description, and setting of land boundaries.

08.26 02 Engineering and Construction Surveying

The study and use of surveying techniques in engineering and construction processes.

08.26 03 Geodesy and Geodetic Surveying

The study and measurement of large portions of the earth's surface, using astronomical, cartographical, and surveying methods.

08.26 04 Photogrammetry and Topographic Surveying

The study and making of maps using photographic methods.

08.26 05 Remote Sensing and Environmental Surveying

The study of geographic and environmental features utilizing information from aerial photography, satellites, and related optoelectronic devices and systems.

08.26 06 Cartography

The study of the principles and techniques involved in designing, planning, and constructing maps.

08.26 99 Other Surveying and Mapping (Specify)

08.99 OTHER ENGINEERING AND ENGINEERING TECHNOLOGY (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN ENGINEERING AND ENGINEERING TECHNOLOGY, SEE APPENDIX E.

09 HEALTH CARE AND HEALTH SCIENCES

Subject matter concerned with the restoration or preservation of health through the use of drugs, surgical operations, manipulations, or other curative or remedial methods.

09.01 BASIC HEALTH CARE SCIENCES

The study of the bodily structures and functions of humans and animals, the principles and techniques of identifying and classifying diseases which affect them, and the foundation of scientific knowledge that is essential to the restoration and preservation of health.

09.01 01 Health Care Anatomy

The study of the structure and parts of the human body, including the bones, tissues, organisms, and systems, and their relationship to the restoration and preservation of good health.

09.01 01 01 Dental Anatomy

The study of the structure and macroscopic and microscopic analysis of human teeth and the interrelationship of their parts.

09.01 01 02 Gross Anatomy

The study of the structure of all regions of the human body by means of dissection and X-ray.

09.01 01 03 Microanatomy

The study of the structure of the human body, including the organization of cells, tissues, and organs, using stained sections, light microscopy, and electron micrographs.

09.01 01 04 Ocular Anatomy

The study of the structure and parts of the human eye, and their interrelationship to the process of seeing.

09.01 02 Biochemistry (See 15.04 03 – Biochemistry)

The study of the nature and chemical composition of the substances that make up the human body, the changes in these substances, and the energy associated with those changes.

09.01 03 Clinical Chemistry

The study of the application of chemical knowledge and techniques to specimens from the human body to provide information to aid in the prevention, diagnosis, prognosis, and treatment of disease.

09.01 04 Diagnostics

The study of the principles and techniques of determining, by examination, the nature and circumstances of a diseased condition in animals or humans.

09.01 05 Embryology (See 15.03 05 – Embryology)

The study of the formation, development, structure, and functional activities of embryos: organisms in the earlier stage of development as before emergence from the egg or before metamorphosis.

09.01 06 Epidemiology

The study of the nature and treatment of epidemic diseases which affect large numbers of people at the same time, spreading from person to person in localities where it was not prevalent previously.

09.01 07 Medical Genetics

The study of the resemblances and differences of related organisms resulting from the interaction of their genes and their environment, and the application of such knowledge to the restoration and preservation of good health.

09.01 08 Hematology

The study of the nature, functions, and diseases of blood and blood-forming organs and tissues in animals and humans.

09.01 09 Histology (See 15.03 08 – Histology)

The study of the microscopic structure, composition, and function of organic tissues in animals and humans.

09.01 10 Dental Oral Hygiene

The study of techniques of providing oral prophylaxis, applying medication, and providing dental health education services, both for chairside patients and in community health programs, under the supervision of a dentist.

09.01 11 Medical Hygiene

The study of the conditions and practices that are conducive to the preservation of good health in humans and animals.

09.01 12 Immunology

The study of the phenomena of immunity from disease, the production of such immunity in humans and animals, induced sensitivity, and allergy.

09.01 13 Infectious Diseases

The study of the nature and treatment of diseases which are communicable by infection as from one human or animal to another, or from one part of the body to another.

09.01 14 Microbiology (See 15.03 11 – Microbiology)

The study of the nature and properties of harmful microorganisms and of the disease processes they induce in humans and animals.

09.01 14 01 Bacteriology (See 15.03 17 – Bacteriology)

The study of the growth, morphology, physiology, taxonomy, ecology, and host-parasite relationships of bacteria which cause disease in humans or animals.

09.01 14 02 Mycology (See 15.03 18 – Mycology)

The study of the morphology, physiology, taxonomy, and ecology of fungi that cause disease in humans or animals.

09.01 14 03 Parasitology (See 15.03 13 – Parasitology)

The study of animal parasites that live on or in an organism of another species, from the body of which it obtains nutriment, and to which it frequently spreads disease.

09.01 14 04 Virology

The study of the morphology, genetics, physiochemical properties, and ecology of viruses and the diseases they cause in humans and animals.

09.01 15 Health Care Nutrition

The study of the act or process by which humans and animals take in and utilize food material, and the health consequences of lacking good nutrition.

09.01 16 Oral Biology

The study of the development, aging, structure, and function of the oral-facial region of the human body.

09.01 17 Pathology

The study of the cause and effect of diseases with emphasis on the structural and functional changes which develop during the disease process, and the systematic methods of detecting these changes.

09.01 17 01 Cytology

The study of the structure, form, and functions of cells, and of the technique of microscopic examination of cells taken from a body surface to detect malignant cellular change.

09.01 17 02 Neuropathology

The study of the pathology of the nervous system, including the study of functional and structural changes and diseases that affect the nerves of humans and animals.

09.01 17 03 Ocular Pathology

The study of the functional and structural changes and diseases that affect the eyes.

09.01 17 04 Oral Pathology

The study of the functional and structural changes and diseases that affect the area of the mouth.

09.01 18 Pharmacology

The study of the therapeutic and toxic effects of drugs, including pharmacodynamic behavior, metabolism, interactions with other chemicals, and the biochemical and physiological effects on the human body.

09.01 19 Health Care Physiology

The study of the organic processes or functions of living organisms or their parts, and their relationship to the restoration and preservation of good health.

09.01 20 Radioassay

The study of the principles and techniques of using radioactive tracers and radiation detection methods to measure biological activity in the bloodstream or tissues of humans and animals.

09.01 21 Radiobiology

The study of the effects of light and ultraviolet and ionizing radiations on living tissues or organisms.

09.01 22 Serology

The study of the properties of serums, and their preparation and use in the diagnosis, prevention, and treatment of disease.

09.01 23 Toxicology

The study of the nature, source, identification, and characteristics of poisons, toxic substances, and exogenous chemical agents which can cause death, illness, or injury upon contact with, or ingestion into the body, including the detection and measurement of their effects and the use of antidotes and other curatives.

09.01 99 Other Basic Health Care Sciences (Specify)

09.02 CLINICAL HEALTH SCIENCES

The study of the principles and procedures used in the observation, diagnosis, care, and treatment of illness, disease, injury, deformity, or other anomalies in humans and animals.

09.02 01 Cardiology

The study of the structure of the heart and its functions in health and disease.

09.02 02 General Dentistry

The study of the prevention, diagnosis, and treatment of diseases of the teeth and gums and related parts, including the replacement of missing teeth.

09.02 03 Dental Materials

The study of the substances used in the care and repair of teeth, gums, and other structures in the oral cavity.

09.02 04 Endodontics

The study of the etiology, diagnosis, prevention, and treatment of conditions that affect the dental pulp and other periodontal tissues, including pulp canal therapy and root canal therapy.

09.02 05 Occlusion

The study of the principles and techniques of fitting together the teeth of the lower jaw with the corresponding teeth of the upper jaw.

09.02 06 Operative Dentistry

The study of the techniques and principles of cavity preparation, manipulation of restorative materials, instrumentation, and filling or fitting.

09.02 07 Oral Diagnosis and Medicine

The study of the techniques and procedures for examining patients for the signs or symptoms of oral disease.

09.02 08 Orthodontics

The study of the principles and techniques involved in the prevention and correction of dental and oral anomalies.

09.02 09 Periodontology and Periodontics

The study of the nature and treatment of diseases which affect the mucous membranes and other structures which surround and support the teeth.

09.02 10 Programmatic Pain Control

The study of the principles and techniques for administering to patients substances which reduce pain or raise pain threshold limits in the course of dental work.

09.02 11 Prosthodontics

The study of the principles and techniques of constructing artificial devices, and the restoration and maintenance of oral function by the replacement of missing teeth and other oral structures with such artificial devices.

09.02 12 Dermatology

The study of the skin, its structures, functions, diseases, and the treatment of skin diseases.

09.02 13 Endocrinology

The study of the endocrine glands and their secretions in relation to their processes or functions, including their care and treatment.

09.02 14 Gastroenterology

The study of the structures, functions, disorders, and care and treatment of the stomach and intestines.

09.02 15 Internal Medicine

The study of the principles and procedures involved in the diagnosis and nonsurgical treatment of diseases of the body.

09.02 16 Nephrology

The study of the structure, function, diseases, and care and treatment of the kidneys.

09.02 17 Neurology

The study of the structure, function, disorders and diseases, and care and treatment of the nervous system.

09.02 18 Ophthalmology

The study of the anatomy, physiology, diseases and disorders, and care and treatment of the eye.

09.02 19 Optometry

The study of the principles and techniques for testing, determining defects, and prescribing corrective means for decreasing deficiencies in an individual's vision.

09.02 20 Orthopedics

The study of the principles and techniques of correcting or curing deformities and diseases of the spine, bones, joints, muscles, or other parts of the skeletal system.

09.02 21 Otorhinolaryngology

The study of the anatomy, physiology, disorders and diseases, and care and treatment of the ear, the nose, and the throat.

09.02 22 Podiatry

The study of the anatomy, physiology, disorders and diseases, and care and treatment of the feet.

09.02 23 Proctology

The study of the anatomy, physiology, disorders and diseases, and care and treatment of the rectum and anus.

09.02 24 Psychiatry

The study of the diagnosis, treatment, and prevention of disorders of the mind.

09.02 25 Urology

The study of the anatomy, physiology, disorders and diseases, and care and treatment of the genitourinary tract.

09.02 31 Allergy

The study of the diagnosis, care, and treatment of the condition of hypersensitivity of the body to specific substances that results in various types of distressful reactions.

09.02 32 Oncology

The study of the diagnosis, development, characteristics, and treatment of tumors.

09.02 33 Rheumatology

The study of the diagnosis, development, characteristics, and treatment of the condition or disease which involves painful inflammation and stiffness of the muscles and joints.

09.02 41 Geriodontics

The study of the principles and techniques of diagnosing and treating the dental conditions of aging and aged persons.

09.02 42 Gerontology

The study of the process of aging, and of the care and treatment of the special problems of aged people.

09.02 43 Gynecology

The study of the nature and treatment of diseases of women, especially those affecting the reproductive system.

09.02 44 Obstetrics

The study of the process of childbirth, and of the care and treatment of women in childbirth and during the period before and after delivery.

09.02 45 Pediatrics

The study of the principles and techniques associated with the medical and hygienic care of children and of the diagnosis and treatment of children's diseases.

09.02 46 Pedodontics and Pediatric Dentistry

The study of the principles and techniques of diagnosing and treating the dental and mouth conditions of young children.

09.02 51 Acupuncture

The study of the principles and techniques of the Chinese medical practice that attempts to cure illness or reduce pain by puncturing specified areas of the skin with needles.

09.02 52 Anesthesiology

The study of the principles and practices of administering substances that produce general or local insensibility to pain and other sensations.

09.02 53 Health Care Assisting

The study of the principles and techniques of assisting a health care professional in carrying out their tasks and responsibilities in a variety of health care settings.

09.02 53 01 Dental Assisting

The study of the techniques of providing assistance to a supervising dentist, including chairside procedures during dental operatory, reception and clerical work, and selected laboratory work.

09.02 53 02 Medical Assisting

The study of the techniques of providing assistance to medical doctors in clinics, offices, and other health care settings.

09.02 53 03 Nursing Assisting

The study of techniques for performing designated tasks involved in the personal care of individuals receiving nursing service, under the supervision of a nurse.

09.02 53 04 Veterinary Assisting

The study of techniques for providing assistance to a supervising veterinary physician in administering appropriate medical care and treatment to animals.

09.02 54 Chiropractic

The study of the principles and techniques for relieving disorders believed due to abnormal function of the nervous system by manipulation and treatment of the structures of the body, especially those of the spinal column.

09.02 54 01 Chiropractic Adjusting Techniques

The study of the principles and methods used to manually restore normal motion or nerve function that has been impaired by a partial dislocation or sprain.

09.02 54 02 Chiropractic Clinical Applications

The study of the principles and techniques involved in diagnostic evaluation, case management, and adjustive applications in the practice of chiropractic.

09.02 54 03 Chiropractic Roentgenology

The study of the principles and techniques of using X-ray for diagnostic or analytical purposes to determine the presence or absence of subluxation, the need for proper corrective adjustments, to discover contraindications to chiropractic care, and for referral to other health care practitioners.

09.02 55 Nursing

The study of techniques and procedures for providing care for sick, disabled, infirm, or other individuals, including the administering of medications and treatments, assisting a physician during treatments and examinations, and planning education for health maintenance.

09.02 55 01 Primary Nursing

The study of the principles and techniques of providing nursing care to people who seek health information, who have a chronic or progressive illness requiring supportive management and periodic evaluations, who have a common and usually simple episodic illness, and who require immediate emergency care and referral for care of serious disease and trauma.

09.02 55 02 Secondary Nursing

The study of the principles and techniques of providing nursing care to people who have an illness or disability evidencing rapid onset, severe symptoms, and a short course.

09.02 55 03 Tertiary Nursing

The study of the principles and techniques of providing nursing care to people who have long-term reversible illnesses requiring intermittent manipulations of therapeutic regimens, or who have chronic irreversible illnesses requiring on-going comprehensive management.

09.02 56 Osteopathy

The study of the system of therapy utilizing accepted physical, medical, and surgical methods, of diagnosis and therapy, and emphasizing the importance of normal body mechanics and manipulation methods of detecting and correcting faulty body structure.

09.02 57 Physiatry, Physical Medicine

The study of the principles and techniques of medicine which deal with the diagnosis, treatment, and prevention of disease with the aid of physical agents, such as light, heat, cold, water, and electricity, or with mechanical apparatus.

09.02 58 Preventive Health Care

The study of the principles and techniques that are used on a regular and planned basis to prevent the occurrence of disease or injury, and to maintain health through established methods.

09.02 58 01 Preventive Dentistry

The study of the principles and techniques or substances which are used to avoid dental disease, and which are a part of an on-going program of prevention and care.

09.02 58 02 Preventive Medicine

The study of the principles and techniques of medicine which deal with the promotion of physical and mental health, the prevention of disease, and the prolongation of life, as opposed to the mere treatment of existing disease.

09.02 58 03 Veterinary Preventive Medicine

The study of the methods and techniques for maintaining animal health through diet, innoculations, care, and other preventive practices.

09.02 59 Radiology

The study of the principles and techniques of using roentgen rays and radioactive substances for diagnostic and therapeutic purposes.

09.02 60 Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities by manual operation and manipulation or by using instruments and appliances.

09.02 60 01 Abdominal Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the abdomen and adjacent areas by manual manipulation or by using instruments and appliances.

09.02 60 02 Broncho-Esophagology

The study of the principles and techniques of treating diseases, injuries, or deformities of the trachea and esophagus and adjacent areas by manual manipulation or by using instruments and appliances.

09.02 60 03 Burns Therapy

The study of the principles and techniques of treating injuries caused by heat, abnormal cold, chemicals, poison gas, electricity, or lightning by manual manipulation or by using instruments and appliances.

09.02 60 04 Cardiothoracic Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the heart and chest and adjacent areas by manual manipulation or by using instruments and appliances.

09.02 60 05 Colon and Rectal Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the colon and rectum and adjacent areas by manual manipulation or by using instruments and appliances.

09.02 60 06 Hand Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the hands by manual manipulation or by using instruments and appliances.

09.02 60 07 Head and Neck Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the head and neck and adjacent areas by manual manipulation or by using instruments and appliances.

09.02 60 08 Maxillo-Facial Prosthetics

The study of the principles and techniques of performing restorative surgery to the area of the jaws and face.

09.02 60 09 Neurological Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the nervous system by manual manipulation or by using instruments and appliances.

09.02 60 10 Operating Room Technology

The study of the principles and techniques of providing general technical assistance on the surgical team while in the operating room.

09.02 60 11 Oral Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the jaws and associated structures by manual manipulation or by using instruments and appliances.

09.02 60 12 Pediatric Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of children by manual manipulation or by using instruments and appliances.

09.02 60 13 Plastic Surgery

The study of the principles and techniques of repairing or replacing malformed, injured, or lost organs or tissues using surgical methods.

09.02 60 14 Thoracic Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the region of the chest by manual manipulation or by using instruments and appliances.

09.02 60 15 Urologic Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the genitourinary tract by manual manipulation or by using instruments and appliances.

09.02 71 Aerospace Medicine

The study of the integration and application of the fundamentals of medicine and the basic sciences to aerospace travel, including such things as biological problems peculiar to aerospace travel, and the adaptation of individuals to the conditions of aerospace travel.

09.02 72 Family Medicine

The study of the prevention, diagnosis, and treatment of diseases and injuries that commonly occur in the general population.

09.02 73 Forensics

The study of the relationship and application of medical facts to legal problems.

09.02 73 01 Forensic Dentistry

The study of the relationship and application of dental facts to legal problems, as in using the teeth to identify the dead.

09.02 73 02 Forensic Medicine

The study of the relationship and application of medical facts to legal problems of civil and criminal law, especially in court proceedings.

09.02 73 03 Forensic Psychiatry

The study of the relationship and application of psychiatric knowledge and techniques to legal problems of civil and criminal law, as in determining legal insanity.

09.02 74 Hospital Dentistry

The study of dental treatment procedures in the hospital emergency room and dental procedures in the operating room.

09.02 75 Industrial Medicine

The study of the principles and techniques of providing medical care for illnesses and injuries that are found in business and industrial settings.

09.02 76 Nuclear Medicine

The study of the principles and techniques of medicine that deal with the diagnosis and treatment of illnesses and injuries that are peculiar to atomic energy devices and installations.

09.02 77 Tropical Medicine

The study of the principles and techniques of medicine that deal with the diagnosis and treatment of diseases and other conditions that occur in the tropics.

09.02 99 Other Clinical Health Sciences (Specify)

09.03 REHABILITATION AND THERAPY

The study of the principles and techniques used in assisting persons who are handicapped because of illness or injury to overcome or compensate for any loss of function, and to restore their physical or mental health to an optimum level.

09.03 01 Audiology and Speech Pathology

The study of the nature and treatment of hearing and speech diseases and disorders, including the principles and techniques of providing therapy that restores or partially restores normal functioning.

09.03 02 Dietetics and Nutrition

The study of the principles and techniques of using food and drink for therapeutic purposes to promote good health, and to eliminate disease.

09.03 03 Occupational Therapy

The study of the principles and techniques of providing therapy that offers mental diversion for the patient, and frequently serves to exercise an affected part of the body, and gives vocational training that would enable them to enter the work force.

09.03 04 Orthotics

The study of the principles and techniques of writing specifications for making and fitting braces and appliances for body deformities and disorders, following the prescription of a qualified medical practitioner.

09.03 05 Physical Therapy

The study of the principles and techniques of treating disease, bodily weakness, or physical defects by physical remedies, including massage and gymnastics.

09.03 06 Prosthetics

The study of the principles and techniques of writing specifications for making and fitting artificial limbs, following the prescription of a qualified practitioner.

09.03 07 Radiation Therapy

The study of the principles and techniques of using radiation-producing devices to administer therapeutic treatments as prescribed by a radiologist.

09.03 08 Recreation Therapy

The study of the principles and techniques of treating illness, disease, or injury through participation in recreation activities.

09.03 09 Respiratory Therapy

The study of the principles and techniques of treating illness, disease, or injury through the use of breathing methods and apparatus, including the administration of oxygen and other sustaining gases.

09.03 10 Special Therapy

The study of the principles and techniques of using specially designed therapeutic procedures to treat a specific illness, disease, or injury.

09.03 99 Other Rehabilitation and Therapy (Specify)

09.04 PHARMACEUTICAL SCIENCE

The study of the principles and procedures of procuring, preparing, compounding, recommending, administering, and dispensing drugs, medicines and devices used in the diagnosis, treatment, or prevention of disease.

09.04 01 Biopharmaceutics

The study of the factors that influence the extent and rate of absorption of drugs from various dosage forms.

09.04 02 Drug Distribution Systems

The study of the systems for the distribution of drug products and devices from the manufacturer to the ultimate consumer; including drug distribution, economics of the pharmaceutical industry, and record and control systems.

09.04 03 Drug and Drug Abuse Information

The study of the principles and procedures associated with the collection, storage, evaluation, and communication of drug information in response to patient health care problems.

09.04 04 Drug Regulation and Control

The study of statutes, regulations, and case law that are applicable to the procuring, manufacturing, administering, prescribing, storing, and dispensing of drugs, including pharmacy law, Federal Food and Drug control, pharmaceutical jurisprudence, and legal aspects of pharmacy management.

09.04 05 Industrial Pharmacy

The study of the application of pharmaceutical, physicochemical, and engineering principles and technologies to the

development of various pharmaceutical dosage forms on an industrial scale, including cosmetic technology, sterile products, product development, and manufacturing pharmacy.

09.04 06 Nuclear Pharmacy

The study of the preparation, dispensing, and advising of drugs that are used in diagnosis and treatment of disease, some of whose constituent atoms are radioactive, including clinical radiopharmacy and radiomedications.

09.04 07 Pharmaceutical Chemistry

The study of the chemical and physical properties of organic and inorganic compounds which have medical or pharmaceutical uses, including the synthesis of organic drugs and inorganic pharmaceutical chemistry.

09.04 07 01 Organic Pharmaceutical Chemistry

The study of the organic compounds which have medical or pharmaceutical uses, the relationships between chemical structure and pharmacological activity, and the principles of drug design; including the chemistry of synthetic drugs, heterocyclics, drug design, and organic medicinal chemistry.

09.04 07 02 Analytical Pharmaceutical Chemistry

The study of the principles and procedures of applying analytical chemistry to the analysis of pharmaceutical dosage form systems which includes drugs and dosage form excipients, packaging materials, and the qualitative and quantitative determination of drugs or drug metabolites in biological fluids and tissues; including quantitative pharmaceutical chemistry, pharmaceutical quality control, and bioassay.

09.04 08 Pharmaceutics

The study of the principles and procedures of applying mathematics, statistics, physics, chemistry, physico-chemistry, and physiology to the formulation, manufacture, compounding, storage, and dispensing of drug products and devices; including dosage forms, pharmacy principles, dispensing, pharmacy calculations, and pharmaceutical technology.

09.04 09 Pharmacognosy

The study of the drugs and chemicals which have their origin in or are derived from plant and animal sources, including the history, collection, identification, preparation, composition, and use of these drugs and chemicals.

09.04 10 Pharmacokinetics

The study of the kinetics of absorption, distribution, metabolism, and excretion of drugs and chemicals.

09.04 11 Pharmacy Practices and Management

The study of the knowledge, techniques, and procedures needed for the delivery of pharmaceutical services; including pharmaceutical marketing, professional accounting, pharmacy practice, financial management of pharmacy practice, pharmacy management, clinical pharmacy, health care accessories and appliances, and non-prescription drugs.

09.04 11 01 Community Pharmacy

The study of the knowledge, techniques, and procedures needed for the delivery of pharmaceutical services in the community, including community pharmacy administration, ethics, and community practice.

09.04 11 02 Institutional Pharmacy

The study of the knowledge, techniques, and procedures needed for the delivery of pharmaceutical services in institutions, such as hospitals, extended care facilities, U.S. Public Health Service, Community Health Centers, including hospital pharmacy administration, hospitalized patient care, sterile produce formulation, and organization of pharmacy services in health care facilities.

09.04 12 Physical Pharmacy

The study of the application of physicochemical principles to pharmaceutical systems, including kinetics of drug degradation and stabilization, pharmaceutical colloids, dispensed systems, and equilibrium phenomena.

09.04 99 Other Pharmaceutical Science (Specify)

09.05 EMERGENCY SERVICES

The study of the methods, procedures, and techniques of providing health care services to persons who need emergency treatment and are not housed in a health care facility.

09.05 01 Cardiopulmonary Resuscitation

The study of the principles and techniques for reviving the actions of the heart and lungs from a state of apparent death or unconsciousness, using mechanical devices or hands-on techniques.

09.05 02 Emergency Extrication

The study of the techniques and procedures required to respond to medical emergency calls, to evaluate the nature of the emergencies, to take appropriate prompt action to reduce the medical hazards to the receiving station, and to assist the emergency room staff of general hospitals.

09.05 03 Emergency Medical Communications

The study of the development and use of electrical and electronic devices, sensors, and other equipment used in communicating between the hospital or care center and the emergency unit in the field.

09.05 04 First Aid

The study of the skills necessary, in times of emergency, to prevent the death, or further injury, of a person until the

services of a physician or other regular medical or surgical care can be administered.

09.05 99 Other Emergency Services (Specify)

09.06 HOSPITAL AND HEALTH CARE ADMINISTRATION

The study of the principles and procedures of planning, organizing, and controlling a hospital or health care facility.

09.06 01 Hospital Organization and Management

The study of the principles and procedures of applying management methods and techniques to hospitals, including problem solving, executive role, personnel management, financial management, patient care, and support services.

09.06 01 01 Longterm Care Facilities

The study of the principles and procedures of planning, organizing, and directing a nursing home or other longterm care facility.

09.06 01 02 Patient Care Management

The study of the principles of applying the concepts of management, organizational behavior, personnel management, legal aspects, budgeting, policy development, and continuing education as they relate to patient care in a hospital or health care facility.

09.06 02 Health Care Delivery Systems

The study of the principles and practices of providing health care services through alternate delivery systems, including their characteristics, costs, utilization, and efficacy.

09.06 03 Health Organizations, Standards, and Evaluation

The study of the characteristics of health organizations, the current standards in the health care field, and the relationship of standards to health care evaluation.

09.06 99 Other Hospital and Health Care Administration (Specify)

09.07 PUBLIC HEALTH

The study of the formulation and delivery of public preventive and curative health services.

09.07 01 Biometry

The study of the application of biometric methods for analyzing community health delivery systems.

09.07 02 Community Medicine

The study of the techniques and procedures for providing health care and services to the community through public agencies.

09.07 03 Environmental Health Administration

The study of the methods and procedures for eliminating or controlling air and water pollution, waste and sewage, noise, vibration, fungi, and other environmental hazards.

09.07 04 Human Ecology

The study of the relationship between a person's biologic functioning and the environment.

09.07 05 Industrial Health Administration

The study of the theories and techniques for meeting the health and environmental problems which occur in the industrial setting.

09.07 06 Maternal and Child Health Administration

The study of the methods and procedures for providing health care for mothers and children.

09.07 07 Mental Health Administration

The study of the methods and procedures for providing community mental health programs and for providing care for mentally ill persons.

09.07 08 Occupational Medicine

The study of the techniques and procedures for providing care to persons who sustain injury on the job.

09.07 09 Physiological Hygiene

The study of nutrition, tests and measurements of physical fitness, gerontology, adaptation in health and disease, body composition, circulatory dynamics, and related topics.

09.07 10 Public Health Administration

The study of the methods of administering, planning, and coordinating the health service needs of communities.

09.07 99 Other Public Health (Specify)

09.08 VETERINARY MEDICAL SCIENCES

The study of the nature, prevention, and treatment of animal diseases and the medical and surgical treatment of animals.

09.08 01 Veterinary Animal Medicine

The study of the practices of medicine as applied to animals.

09.08 01 01 Aquatic Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of water-related animals.

09.08 01 02 Avian Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of birds.

09.08 01 03 Bovine Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of oxen and cows.

09.08 01 04 Canine Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of dogs.

09.08 01 05 Caprine Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of goats.

09.08 01 06 Equine Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of horses.

09.08 01 07 Feline Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of cats.

09.08 01 08 Food Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of animals used for food.

09.08 01 09 Laboratory Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of animals for laboratory use.

09.08 01 10 Ovine Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of sheep.

09.08 01 11 Zoo, Wildlife, and Exotic Animal Medicine

The study of the techniques and procedures for diagnosis and treatment of medical problems of zoo animals and wildlife.

09.08 02 Veterinary Pathology

The study of the nature and effect of diseases of animals, including their diagnosis, treatment, and prevention.

09.08 03 Veterinary Public Health

The study of the liaison between public health officials and owners of animals with the intent of keeping animals healthy and safe, and of detecting and stopping animal epidemics.

09.08 04 Veterinary Theriogenology

The study of the principles of animal breeding, including the development of mixed and pure breeds and artificial insemination.

09.08 99 Other Veterinary Medical Sciences (Specify)

09.09 GENERAL PERSPECTIVES OF HEALTH CARE AND HEALTH SCIENCES

The study of the history and role of health care and health sciences in human culture and their relationship to other fields of knowledge, including concern for the means by which the affiliated professions are conducted.

09.09 01 Health Planning

The study of the processes involved in the development of alternative ways of achieving the health goals and expectations of society, including the identification of the consequences of each alternative for the purpose of guiding decision makers in their deliberations.

09.09 02 History of Health Care and Health Sciences

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with health care and health sciences.

09.09 03 Professional Practices in Health Care and Health Sciences

The study of establishing and maintaining health care services, including the design and construction of delivery facilities, the determination of fees and charges, and the acknowledgement of standards of practice as identified and presented by colleagues.

09.09 03 01 Dental Professional Practices

The study of modes of practice and financing sources, office design and site selection, office management procedures, methods of building a practice, and methods for patient education.

09.09 03 02 Medical Professional Practices

The study of the principles and techniques of conducting a practice of medicine.

09.09 03 03 Veterinary Professional Practices

The study of the techniques and procedures followed in the exercise of the profession of veterinary medical care.

09.09 04 Ethics and Jurisprudence in Health Care and Health Sciences

The study of the ethical and legal expectations and requirements of practitioners in the fields of health care and health sciences, including professional and association codes and standards.

09.09 05 Clinical Practices in Health Care and Health Sciences.

The study of the principles and procedures of observing, diagnosing, and treating of injuries or illnesses in clinical

settings, including hospitals, offices, and health care centers.

09.09 05 01 Dental Clinical Practices

The study of the principles and procedures of observing, diagnosing, and treating dental illnesses or injuries in clinical settings.

09.09 05 02 Medical Clinical Practices

The study of the principles and practices in observing, diagnosing, and treating medical illnesses or injuries in a clinical setting.

09.09 05 03 Veterinary Clinical Practices

The study of the principles and practices of observing, diagnosing, and treating illnesses or injuries of animals in clinical settings.

09.09 99 Other General Perspectives of Health Care and Health Sciences (Specify)

09.99 OTHER HEALTH CARE AND HEALTH SCIENCES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

.FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN HEALTH CARE AND HEALTH SCIENCES, SEE APPENDIX E.

10 HOME ECONOMICS

Subject matter concerned with the relationship between the physical, social, emotional, and intellectual environment in and of the home and family, and the development of individuals. Included is the study of the natural and social sciences and humanities in the development of attitudes, knowledge, and ability pertaining to clothing and textiles, consumer education, food and nutrition, home management, housing, human development and family studies, and institutional management.

10.01 CLOTHING AND TEXTILES

The study of ways of meeting psychological, sociological, economic and physiological needs for clothing and textiles, including techniques of production, distribution, marketing, consumption, refurbishing, and relevant legislation.

10.01 01 Clothing and Textile Maintenance

The study of the principles and procedures for care, cleaning, and repair of clothing and textiles in their use by individuals, families, and institutions.

10.01 02 Clothing and Textile Merchandising

The study of the characteristics of clothing and textile products, and the techniques of buying, advertising, displaying, and selling these goods for use by individuals, families, and institutions.

10.01 03 Clothing and Textile Selection

The study of the principles and procedures for choosing clothing and textile products for individuals, families, and institutions to meet aesthetic, economic, physical, psychological, and social needs.

10.01 04 Clothing Construction and Alterations

The study of the principles and techniques of individual and mass production of garments and their modification for use by individuals.

10.01 05 Clothing Design

The study of the techniques of creating wearing apparel or garments through use of structural and decorative lines to meet varying needs of individuals.

10.01 06 Clothing Economics

The study of the transformation of limited natural or man made fiber resources into clothing and textile products, and their use by individuals, families, and institutions for satisfaction of human needs.

10.01 07 Fashion Design

The study of the creative combination of line, form, and fabric in the production of garments and accessories for the high fashion field.

10.01 08 History of Clothing and Textiles

The study of the development, changes, and trends in the design, production, distribution, and use of clothing and textile products by individuals, families, and institutions in relation to other historical phenomena.

10.01 09 Sociopsychological Aspects of Clothing and Textiles

The study of sociopsychological and environmental factors that influence clothing behavior, and the relation of clothing to development of self-concept, interpersonal communication, and other human interaction.

10.01 10 Textile Design

The study of the processes used to create the structure, coloration, and function of fabrics that will be used by individuals, families, and institutions.

10.01 11 Textile Production

The study of the relationship between materials and processes in the manufacture of textiles.

10.01 11 01 Textiles Fibers

The study of the physical and chemical properties of textile fibers in relation to the performance of fabrics and other textile products manufactured from them.

10.01 11 02 Textile Finishes

The study of the chemical and mechanical finishes applied to textiles in relation to their performance in clothing and other textile products.

10.01 99 Other Clothing and Textiles (Specify)

10.02 CONSUMER EDUCATION

The study of attitudes, concepts, skills, and understandings of consumers which contribute to their satisfaction in their choice and utilization of goods and services.

10.02 01 Consumer Choice

The study of the skills, concepts, processes, and attitudes involved in the selection of goods and services.

10.02 02 Consumer Economics

The study of the interrelationship of the economy and of management by individuals in the provision and utilization of goods and services.

10.02 03 Consumer Problems

The study of issues and problems facing the individual and collective consumers in society.

10.02 04 Consumer Resources

The study of the development and utilization of human and material means through which desired life styles may be achieved by individuals, families, and communities.

10.02 05 Consumer Rights and Responsibilities

The study of legislation, the channels of information, and ameliorative actions and processes that consumers can follow to protect their rights and fulfill their responsibilities.

10.02 06 Personal and Family Finance

The study of income and distribution patterns that meet individual and family needs and wants, together with the means of achieving financial security.

10.02 07 Consumer Information

The study of the availability and types of consumer information and the uses consumers make of it.

10.02 99 Other Consumer Education (Specify)

10.03 FOOD AND NUTRITION

The study of the role of food and nutrition in personal and family living, and in commercial and institutional food services, with emphasis being placed on food handling techniques, purchase and storage of food, planning, preparing, and serving meals to meet the needs of individuals and families.

10.03 01 Community Nutrition

The study of the methods of assessing the nutritional status of individuals or population groups and of devising and implementing methods to change nutritional patterns and food selection if necessary.

10.03 02 Dietetics

The study of the science and art of human nutritional care, including the management of group feeding, and extending and imparting knowledge about foods which will provide nutrients throughout the life cycle that are sufficient for optimum health and disease control and eradication.

10.03 02 01 Clinical Dietetics

The study and application of principles of normal nutrition to clinical problems including descriptions of altered nutrient requirements in human disease.

10.03 02 02 Therapeutic Dietetics

The study of the modification of diet in disease or deficiency states including patient rehabilitation and education.

10.03 03 Experimental Foods

The study of the application of principles of food chemistry to the creation and testing of foods for individuals, families, and institutional use.

10.03 04 Food Habits and Patterns

The study of the relationship of the food practices of various groups of people as influenced by cultures, religion, knowledge, attitudes, education, and socioeconomic level.

10.03 05 Food Production Technology

The study of the biological and chemical principles essential for food processing, as well as the equipment and procedures used in the production and distribution of food.

10.03 06 Food Regulations

The study and analysis of the role of local, State, and Federal laws and agencies in governing production and distribution of food, including sanitation and safety, nutrition labeling, and other food labeling regulations.

10.03 07 Food Related Equipment

The study of the functions, use, and care of equipment used in food production.

10.03 08 Food Selection

The study of the principles and methods of planning and purchasing food for individuals, families, and institutions.

10.03 09 Food Service

The study of the techniques of food presentation, table settings, etiquette, and table service for various types of individual, family, and institutional dining and entertainment.

10.03 10 Food Storage and Preservation

The study of the principles and techniques of storing, preserving, and preparing food in order to retain nutrients and quality for individual, family, and institutional use.

10.03 11 History of Food and Nutrition

The study of the discoveries, development, changes, issues, and trends in food, food supply, and nutrition as they relate to other historical phenomena and world issues.

10.03 12 Nutrition Education

The study of nutritional and educational concepts and their application through the development of techniques and materials to be used to educate the public to change nutritional behavior of individuals and families.

10.03 13 Nutrition

The study of the science of food, the nutrients and other substances of food, and the processes by which the organism ingests, digests, absorbs, transports, utilizes, and excretes food substances in relationship to human needs.

10.03 14 Preparation of Food

The study of the principles and processes of food production that result in products with designated or specified characteristics.

10.03 99 Other Food and Nutrition (Specify)

10.04 HOME MANAGEMENT

The study of the concepts, skills, and processes through which decisions about the use of resources are directed toward goal achievement in home and family living. The subject matter involves an understanding of goal formulation and of management functions and processes through which the household and financial activities of individuals and families are accomplished.

10.04 01 Decisionmaking

The study of factors and processes involved in arriving at decisions about managing a home.

10.04 02 Resource Management

The study of the relationship between human and material resources, such as time, energy, money, talent, and management of the home.

10.04 03 Management of Work

The study of the principles and procedures used to organize the work of the home to meet the needs of family members.

10.04 04 Work Simplification

The study of the principles and procedures used for reducing time and energy costs of the work of the home.

10.04 05 Special Needs

The study of the application of managerial processes in special situations of individual and family need as for the handicapped, elderly, single heads, and low income.

10.05 HOUSING

The study of psychosocioeconomic and aesthetic aspects of the selection of housing, home furnishings, household equipment, and interior design, and of the maintenance and repair of the home.

10.05 01 Home Furnishings

The study of the selection, use, and care of furniture, carpeting, accessories, and other articles in the home.

10.05 02 Home Maintenance and Repair

The study of the basic techniques for maintaining and repairing a home and its furnishings, including reupholstery, slipcovering, and draperies.

10.05 03 Home Planning and Interior Design

The study of art principles, space planning, functional analysis, traffic patterns, and total home design in relation to individual lifestyles.

10.05 04 Household Equipment

The study of the purpose, selection, care, use, and maintenance of equipment used in the home.

10.05 99 Other Housing (Specify)

10.06 HUMAN DEVELOPMENT AND FAMILY STUDIES

The study of family interrelationships and processes of creating environments for the development of humans within a family setting.

10.06 01 Child Development

The study of processes and principles of the growth and development of children from conception through young adulthood, within the context of cultural, educational, and familial influences, with emphasis on social, emotional, physical, intellectual, and motor development; legislation; programs and support services relating to children.

10.06 01 01 Care and Guidance of Children

The study of the behavior of children and the principles, processes, and techniques of attending and guiding children in family and group situations.

10.06 01 02 Parenting Education

The study of the development of attitudes, concepts, and skills necessary to be an effective parent.

10.06 01 03 Special Needs of Children

The study of the physical, intellectual, social, and emotional characteristics of exceptional children and the strategies for guiding development of such children.

10.06 02 Family Development

The study of the family throughout the life cycle with emphasis on family structures, functions, interactions, and roles of family members.

10.06 02 01 Community Influences and Natural Resources

The study of cultural, social, and technological influences on the family in changing societies, including family programs and support services that are available.

10.06 02 02 Family Crises

The study of factors affecting marital relationships, parent-child relationships, and the functioning of the family as a whole, including economic problems, separation and divorce, death, exceptional children, and illness.

10.06 03 Gerontology

The study of the characteristics, attitudes, and behavior of older people in family settings, including physical, social, economic, and psychological needs and concerns; related legislation; and community resources.

10.06 04 Personal Development

The study of the self-development and actualization of individuals through the family, including physiological and psychological aspects of human sexuality, personal hygiene, grooming, value development, interpersonal relationships, and patterns of adult living.

10.06 99 Other Human Development and Family Studies (Specify)

10.07 INSTITUTIONAL HOUSEKEEPING AND FOOD SERVICE MANAGEMENT

The study of the theory and practices involved in the operation of food service and housekeeping departments of institutions.

10.07 01 Housekeeping Management

The study of principles and procedures related to providing home health services and homemaker and housekeeping services in homes and institutions.

10.07 02 Food Service Management

The study of principles and procedures related to institutional and commercial food services that are found in hospitals, child care centers, homes for the elderly, schools, hotels, motels, and restaurants.

10.07 99 Other Institutional Housekeeping and Food Service Management (Specify)

10.99 OTHER HOME ECONOMICS (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN HOME ECONOMICS, SEE APPENDIX E.

11 INDUSTRIAL ARTS, TRADES, AND TECHNOLOGY

Subject matter concerned with knowledge about mechanical work, a business, a livelihood, or occupation or that requires the development of special skills, especially of a manual or technical nature for individuals seeking occupational entry, upgrading, or retraining.

11.01 CONSTRUCTION

The study of the principles and techniques of erecting, installing, maintaining, or repairing buildings, highways, airports, missile sites, and earth and other structures, using such materials as metal, wood, stone, brick, glass, asphalt, concrete, or composition substances.

11.01 01 Carpentry

The study of the principles and techniques of layout, fabrication, assembly, installation, and repair of structural units, including the care and use of hand and power tools and the knowledge of equipment and materials, common systems of frame construction, and the principles of drafting, blueprint reading, and applied mathematics.

11.01 02 Concrete

The study of the techniques of preparing, mixing, form setting, testing, pouring, and finishing of substance composed of sand, gravel, and cement or similar substances.

11.01 03 Drywall Installation

The study of the principles and techniques of installing and bonding wallboard, plasterboard, or other interior structural surfaces.

11.01 04 Electrical

The study of the principles and techniques associated with the layout, assembly, installation, and testing of electrical fixtures, apparatus, and wiring used in electrical systems.

11.01 05 Environmental Systems

The study of the principles and techniques of installing, operating, and testing various types of heating, air cooling, and air quality control equipment, including humidifiers, filters, and fans.

11.01 06 Estimating

The study of the principles and techniques of calculating and estimating the probable costs of a proposed construction project.

11.01 07 Glazing

The study of the principles and techniques of preparing, fitting, and installing glass in structures and other openings of buildings such as windows, doors, and partitions, or in objects such as display cases and table tops.

11.01 08 Heavy Equipment

The study of the principles and techniques of operating and maintaining heavy-duty equipment such as bulldozers, cranes, graders, tractors, concrete mixers, crawler-mounted shovels, trailer-mounted compressors, and the gasoline or diesel engines powering the equipment.

11.01 09 Ironworking

The study of the principles and techniques of manufacturing, assembling, testing, and repairing of parts, mechanisms, machines, and structures in which iron is cast, formed, shaped, molded, heat treated, cut, twisted, bent, pressed, stamped, fused, marked, or otherwise worked upon.

11.01 10 Landscaping

The study of the principles and practices involved in locating, planting, and maintaining turf, plants, shrubs, trees, or other esthetic plants used for the beautification of home grounds and other areas of human habitation and recreation, usually done in support of a landscape architect.

11.01 11 Masonry

The study of the principles and techniques of cutting, chipping, and positioning concrete blocks, brick, and glass blocks, using binding materials and hand tools.

11.01 12 Millwork

The study of the principles and techniques of fabricating finished carpentry work in a mill, including such things as windows, doors, and molding.

11.01 13 Painting and Decorating

The study of the principles and techniques of preparing and finishing exterior and interior surfaces by the application of protective or decorative coating materials such as lacquer, paint, wallpaper, or related materials.

11.01 14 Plastering and Lathing

The study of the principles and techniques of applying plaster, stucco, lathing, and similar materials to interior and exterior surfaces of structures.

11.01 15 Plumbing

The study of the principles and techniques involved in layout assembly, installing, altering, and repairing piping systems, including related fixtures and fittings in structures, by the use of pipecutting, bending, and threading tools; welding, soldering, and brazing equipment; and other hand and power tools and equipment.

11.01 16 Roofing

The study of the principles and techniques of covering roofs and exterior walls of structures with waterproofing or insulating materials, such as asphalt, aluminum, slate, wood, and related composition materials.

11.01 17 Sheetmetal

The study of the principles and techniques of pattern development, layout, operations, and related information concerned with forming and fabricating sheet metal products.

11.01 18 Site Surveying

The study of the principles and techniques of determining legal location, form, or boundaries of a tract of land by measuring the lines and angles in accordance with the principles of geometry and trigonometry, usually done in support of a professional surveyor.

11.01 19 Welding

The study of the principles and techniques of cutting, fusing, and fabricating metal products with various types of welding equipment.

11.01 99 Other Construction (Specify)

11.02 MANUFACTURING (PRODUCT GENERATION)

The study of the principles and techniques of planning and controlling the production of goods and articles in a factory, shop, or plant as opposed to on-site manufacture.

11.02 01 Ceramics

The study of the principles, techniques, processes, and materials used to prepare and convert clay into products, including molding, throwing, jigging, baking, firing, trimming, and glazing.

11.02 02 Foundry

The study of the principles, techniques, processes, and materials used to pattern, mold, core, cast, and found molten metal, and to shake out or remove molds and finish metal products.

11.02 03 Glass Products

The study of the principles, techniques, processes, and materials used in the production of glass or refractory products, including casting, tempering, blowing, spinning, coating, coloring, cutting, rolling, and polishing.

11.02 04 Health Devices

The study of the principles, techniques, processes, and materials used in the custom fabrication of devices to aid the health and well being of individuals, including dental prosthesis, artificial limbs, and braces and other devices used by persons with physical handicaps.

11.02 05 Leather and Hide Processing

The study of the principles, techniques, processes, and materials used to convert animal hide into leather products, including curing, tanning, dyeing, cutting, sewing, and gluing.

11.02 06 Metalworking

The study of the principles, techniques, processes, and materials used to shape metal products by cutting, forming, finishing, assembling, and heat treating and including rolling, extension milling, sawing, turning, drilling, boring, grinding, pressing, plating, drawing, bending, and hardening.

11.02 07 Needle Trades

The study of the principles, techniques, processes, and materials used in the hand and machine production of garments, including pattern making, cutting, sewing, and finishing.

11.02 08 Paper and Fabrication

The study of the principles, techniques, processes, and materials used to convert wood or cloth into pulp, paper, and paper products in roll or sheet form, including calendaring, texturing, coating, embossing, corregating, and laminating.

11.02 09 Plastics

The study of the principles, techniques, processes, and materials used to generate raw plastic in liquid, granual, or sheet form and to convert those forms into products, including blowing, casting, extension, coating, rolling, bending, and cutting.

11.02 10 Product Development

The study of the principles, techniques, processes, and materials used in the generation of new products, including the determination of product feasibility, resource requirements, machine engineering and design, consumer demand, and finishing processes.

11.02 11 Production Systems

The study of the principles and alternative techniques and processes of producing goods and articles, including evaluation of time and space requirements, costs, and quality and quantity of output.

11.02 12 Textile Production

The study of the principles, techniques, processes, and materials used in the fabrication of textiles from raw fiber, including yarn making, dyeing, weaving, knitting, preshrinking, and teasing.

11.02 13 Tool and Die

The study of the principles, techniques, processes, and materials used to fabricate devices which hold, position, guide, press, blank, shear, pattern, or bend product parts during their production.

11.02 14 Wood Products

The study of the principles, techniques, processes, and materials used to fabricate products from wood forms other than pulp, including operations such as sawing, planing, sanding, finishing, laminating, bonding, and compressing.

11.02 99 Other Manufacturing (Specify)

11.03 POWER SYSTEMS

The study of the principles and practices of fabricating, adjusting, operating, maintaining, and repairing mechanisms or systems which are used to generate energy, transform energy forms, or convert energy into work.

11.03 01 Atomic Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment and systems designed to convert, transmit, or generate power from atom fission or fusion including such components as piles and reactors.

11.03 02 Chemical Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment and systems designed to convert, transmit, or generate power primarily from the chemical reactions of elements, including such chemical components as batteries and internal combustion systems.

11.03 03 Electrical Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment and systems designed to convert, transmit, or generate power from the movement or flow of electrical current, including such electrical components as generators, motors, vacuum tubes, capacitors, transformers, switches, fuses, transistors, and electrical circuitry.

11.03 04 Mechanical Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment for systems designed to convert, transmit, or generate power from linear and circular motion or position, including such mechanical components as turbines, shafts, levers, wheels, belts, gears, hydraulics, pneumatics, chains, couplings, and clutches.

11.03 05 Radiant Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment and systems designed to convert, transmit, or generate power from wave forms, including light, sound, and rays.

11.03 06 Thermic Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment and systems designed to convert, transmit, or generate power from molecular movement or excitement which creates heat, including steam, jets, and engines.

11.03 07 Power Mechanics

The study of the principles, techniques, processes, and materials of energy conversion and power generation through control and transmission, using conventional products and systems.

11.03 08 Power and Energy Sources

The study of the principles and techniques of exploring the forces of energy that can be put to work in useful power systems.

11.03 99 Other Power Systems (Specify)

11.04 PRODUCT SERVICE (MAINTENANCE)

The study of the principles and techniques of repairing, preserving, and maintaining products, equipment, and appliances for continued use in efficient operating condition.

11.04 01 Aircraft Maintenance

The study of the principles and techniques of inspection, repair, servicing, and overhauling of all airplane parts.

11.04 01 01 Air Frame

The study of the principles and techniques of maintaining and repairing the framework and external covering of an aircraft, including fuel and oil tanks, control devices, and hydraulic units.

11.04 01 02 Aircraft Power Plant

The study of the principles and techniques of maintaining and repairing aircraft power plants, including propellers, instruments, and engines.

11.04 02 Appliance Repair

The study of the principles and techniques of applying the theory of electrical circuitry, simple gearing, linkages, and lubrication to the operation, maintenance, and repair of relays, time switches, pumps, and agitators used in appliances, such as washers, dryers, vacuum cleaners, toasters, water heaters, and stoves.

11.04 03 Building Maintenance

The study of the principles and techniques of maintaining the interior and exterior surfaces of residential, commercial, industrial, and recreational buildings, including the use of preventive measures.

11.04 04 Business Machine Maintenance and Repair

The study of the principles and techniques of maintaining and repairing a variety of office machines, such as typewriters, dictation machines, calculators, data processing equipment used for recording and processing data, and duplicating and mailing machines.

11.04 05 Communications Equipment Maintenance and Repair

The study of the principles and techniques of maintaining and repairing communications equipment, including transmitters, antennas, receivers, connectors, displays, and processors.

11.04 06 Custodial Services

The study of the principles and techniques used in the care and cleaning of all types of buildings, including their fixtures and furnishings.

11.04 07 Fabric Maintenance and Repair

The study of the principles and techniques of all phases of fabric maintenance, including plant management and processing for dry cleaning, laundering, sterilization, and other such services.

11.04 08 Heating and Cooling Maintenance and Repair

The study of the principles and techniques of maintaining and repairing heating systems, air conditioning systems, and combustion heating and cooling systems.

11.04 09 Instrument Maintenance and Repair

The study of the principles and techniques of maintaining and repairing meters, instruments, watches and clocks, and other physical measuring devices.

11.04 10 Marine Repair

The study of the principles and techniques of maintaining and repairing the hull, deck and deck structures, sails, steerage, and related components of water craft

11.04 11 Millwrighting

The study of the principles and techniques of maintaining and repairing electrical equipment, plumbing, carpentry, general machining, and other various maintenance tasks within a mill or industrial plant.

11.04 12 Radio-Television Maintenance and Repair

The study of the principles and techniques of maintaining and repairing radios, televisions, two-way mobile communication devices, stereo-phonographs, and tape recording and playback systems.

11.04 13 Small Engine Repair

The study of the principles and techniques of maintaining and repairing small engines, including those for snowmobiles, motorboats, lawn mowers, compressors, and generators.

11.04 14 Vehicle Maintenance and Repair

The study of the principles and techniques of maintaining and repairing vehicles used to transport materials, people, and products.

11.04 14 01 Chassis Repair

The study of the principles and techniques of maintaining and repairing the vehicle chassis, including damaged bodies and fenders, painting, and replacement of body components such as trim.

11.04 14 02 Power and Drive Repair

The study of the principles and techniques of maintaining and repairing diesel and gasoline engines, transmissions, and differential gearing for buses, trucks, ships, railroad trains, construction machinery, and similar equipment.

11.04 14 03 Vehicle Specialties Repair

The study of the principles and techniques of maintaining and repairing to include tune-ups, brakes, emission control, and other components.

11.04 99 Other Product Service (Specify)

11.05 GRAPHIC ARTS

The study of the principles and techniques of image origination, preparation, and graphic reproduction, and providing multiple copies, cards, and covers for private or business and industrial purposes.

11.05 01 Bindery

The study of the principles and techniques of gathering pages, forms, and related materials and assembling them into books or pamphlets, including techniques concerned with binding and repairing books and documents, and in collating, cutting, and fastening.

11.05 02 Copy Preparation

The study of the principles and techniques of preparing photo or copy ready sheets, plates, or masters by hand or mechanical processes.

11.05 02 01 Cold Type

The study of the principles and techniques of preparing copy by either mechanical or electronic means.

11.05 02 02 Hot Type

The study of the principles and techniques of preparing proofs, either by hand or mechanical processes, for the purpose of reproducing impressions on plates or bed presses.

11.05 03 Drawing

The study of the principles and techniques of depicting ideas, messages, or data, through the use of pictures or lines, using pencil, pen, crayon, or other substances.

11.05 03 01 Drafting

The study of the principles, techniques, standards, and conventions for conveying ideas or illustrations graphically through drawings, charts, sketches, maps, and graphs.

11.05 03 02 Illustration

The study of the principles and techniques of conveying information or ideas by two dimensional means, using a variety of materials.

11.05 03 03 Blueprinting

The study of the principles and techniques of photographic printing which produces a white line on a blue background, and is used chiefly in copying architectural and mechanical drawings.

11.05 04 Photography

The study of the principles, techniques, tools, materials, and processes used in photography with emphasis on industrial and commerical uses, including the use of movie and still cameras, developing negatives, and making contact prints, enlargements, and mountings.

11.05 05 Printing

The study of the principles and techniques involved in a graphic reproduction from an original plate or master onto a material surface such as paper or cloth.

11.05 05 01 Gravure (Intaglio)

The study of the principles and techniques of printing from an etched or sunken surface.

11.05 05 02 Letterpress

The study of the principles and techniques involved in the graphic reproduction of impressions on paper or other stock from a metal plate or hot type face.

11.05 05 03 Offset Lithography

The study of the principles and techniques involved in the graphic reproduction of images onto paper or other substances from an original, plate, or master, using an offset duplicator or press.

11.05 05 04 Stencil

The study of the principles and techniques of applying a pattern, design, or words to a surface by rubbing, brushing, or pressing a coloring substance through perforations cut into a thin sheet of cardboard, metal, or other material.

11.05 05 05 Xerography

The study of principles and techniques of preparing graphic reproductions of original materials by using photochemical processes.

11.05 99 Other Graphic Arts (Specify)

11.06 TRANSPORTATION

The study of the principles and techniques of steering or otherwise controlling a vehicle for commercial or public use in the air, on land, or in water, for the purpose of moving people or things from one place to another.

11.06 01 Flight Operations

The study of the principles and procedures of inflight operation of commercial planes, including piloting and navigating.

11.06 02 Ground Operations

The study of the principles and procedures of ground support of commercial planes, including aircraft preflight service and flight control, but excluding passenger service.

11.06 03 Heavy Equipment Operations

The study of the principles and techniques of safely operating off-the-road heavy vehicles, including bulldozers, graders, and scrapers.

11.06 04 Maritime Service

The study of the principles and techniques of seamanship, including the maintenance and operation of large and small commercial or public vessels.

11.06 05 Recreational Vehicle Operations

The study of the principles and techniques of operating recreational vehicles such as snowmobiles, sail boats, and other pleasure craft.

11.06 99 Other Transportation (Specify)

11.07 PERSONAL SERVICE

The study of the principles and techniques that relate to the care, treatment, and disposition of the human body, with emphasis on the physical appearance of individuals.

11.07 01 Barbering

The study of the principles and techniques of haircutting, shaving, shampooing, massaging, and styling hair and hairpieces.

11.07 02 Cosmetology

The study of the principles and techniques of caring for and beautifying hair, skin, and nails for personal enhancement, including permanent waving, hairshaping, and tinting.

11.07 03 Electrolysis

The study of the principles and techniques involved in the removal of superfluous hair from any area of the body by the use of electric current.

11.07 04 Esthetic Skin Care

The study of the principles and procedures associated with specialized topical skin analysis and recommended treatment and care of skin.

11.07 05 Massage

The study of the principles and techniques of treating the body by rubbing or kneading to stimulate circulation, increase suppleness, promote healing, and induce relaxation.

11.07 06 Mortuary Science

The study of the principles and techniques of preparing a person for burial, including embalming, cremating, and other sanitary methods for interment in conformity with legal requirements, and the principles and procedures involved in conducting funerals.

11.07 99 Other Personal Service (Specify)

11.99 OTHER INDUSTRIAL ARTS, TRADES, AND TECHNOLOGY

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN INDUSTRIAL ARTS, TRADES, AND TECHNOLOGY, SEE APPENDIX E.

12 LANGUAGE, LINGUISTICS, AND LITERATURE

Subject matter concerned with the structure and use of words that are common or indigenous to people of the same community or nation, the same geographical area, or the same cultural traditions; including such features as sounds, literature, syntax, phonology, morphology, semantics, sentences, prose and verse, as well as the development of skills and attitudes used in communicating and valuing thoughts and feelings through oral and written language.

12.01 LINGUISTICS (DIACHRONIC AND SYNCHRONIC)

The study of the descriptive, historical, and theoretical aspects of language, its nature, structure, varieties, and development, including especially the sound system (phonology), grammatical system (morphology, syntax), lexical system (vocabulary, semology), and writing system.

12.01 01 Applied Linguistics

The study of the techniques of applying linguistic theory to human uses of language, including teaching.

12.01 01 01 Bilingualism

The study of the linguistic phenomena associated with the acquisition and use of two languages, either coordinated or compound bilingualism.

12.01 01 02 Computational Linguistics

The study of the quantitative methods used in the analysis of language.

12.01 01 03 Contrastive Linguistics

The systematic study of the structure and meaning of two or more languages or dialects.

12.01 01 04 Language Error Analysis

The study of the techniques used in systematically discovering and classifying errors in language.

12.01 01 05 Lexicography

The study of the principles and techniques used in the making of dictionaries.

12.01 02 History of Linguistics

The study of the methodology of tracing and establishing the development of the phonology, morphology, syntax, and semantics of a language or language group.

12.01 03 Language Analysis

The study of the various means of analyzing languages, including morphology, phonology, and syntax.

12.01 03 01 Lexicology

The study of the meanings of words and idiomatic combinations.

12.01 03 02 Morphology

The study of the meaningful word-forms, including affixes which contribute meaning to a word.

12.01 03 03 Phonetics

The study of speech sounds, their production and combination, and their representation by written symbols.

12.01 03 04 Phonology

The study of the sound system of a language which may be based on a phonemic or phonetic description.

12.01 03 05 Semantics

The study of meanings that are attributed to word-forms, words, immediate constituents, phrase-structures, and sentences.

12.01 03 06 Syntax (Grammars)

The study of groupings of words and word-forms into meaningful constituents and phrase structures.

12.01 04 Language Universals

The study of the elements of language which are common to all languages or to groups of languages.

12.01 05 Linguistic Theories

The study of the systems of word structures and word arrangements of a language.

12.01 05 01 Generative and Transformational Theories

The study of the grammatical theory which uses a set of rules, in a required order, capable of generating all possible grammatically acceptable sentences of a language. The rules are commonly expressed as formulas composed of symbols that represent linguistic units and operations; constructions may be derived from others by the process of structural change without change of meaning as by transformations.

12.01 05 02 Structural and Descriptive Theories

The study of grammar which objectively describes and analyzes the structure of a language in terms of formally identifiable units in a hierarchy of increasingly complex combinations and the immediate and ultimate constituents of sentences; sometimes the study of any kind of grammar that is derived inductively from objective observation of a body of utterances in a language.

12.01 05 03 Traditional Grammatical Theories (Latinate)

The study of grammar based on classical Latin grammar, generally using terminology from Latin grammar.

12.01 06 Psycholinguistics

The study of the mental (psychological) processes involved in the production and reception (encoding and decoding) of language.

12.01 07 Sociolinguistics

The study of the use of language in different social environments.

12.01 07 01 Dialectology

The study of dialects, their underlying linguistic systems, and their use.

12.01 07 02 Language Planning

The study of the determination of the official language(s) of an area and the implementation of literary skills.

12.01 07 03 Language Variation

The study of variations within a language or a group of languages, such as jargon or deviations from the standard.

12.01 99 Other Linguistics (Specify)

12.02 LITERARY STUDIES

The study of the approaches used to analyze literature and of the tools used to facilitate practical criticism, emphasizing bibliographical techniques, aesthetics, and the formal study of such theories as Formalism, Structuralism, and the "New Criticism."

12.02 01 Comparative Literature

The study of the comparison of various aspects of literature, based on selected dimensions such as genre, theme, literary period, and language source.

12.02 02 Literary Aesthetics and Appreciation

The study of the development of an appreciation of literature as an art form.

12.02 03 Literary Bibliography

The study of retrieval or creation of a systematic compilation of information relating to publication data of various media relating to literature.

12.02 04 Literary Criticism

The study of the methods and standards for judging the quality of literature.

12.02 05 Literary Theories

The study of the theoretical foundations of literature including historical, philosophical, political, and psychological perspectives.

12.02 99 Other Literary Studies (Specify)

12.03 THE STUDY AND USES OF THE ENGLISH LANGUAGE

The study of the skills and techniques essential to learning the English language.

12.03 01 Dialects of the English Language (Synchronic and Diachronic)

The study of the written or spoken features of English such as sounds, forms, constructions, and words, as they vary individually or in related groups with respect to their geographic or social distribution. The study may be synchronic (of a single point in time) or diachronic (historical).

12.03 02 History of the English Language

The study of the ways in which the various dialects developed in the course of time into the English language, including the influence of nonlinguistic factors such as social and political change and the processes of general language change as they affected the English language.

12.03 03 English Language and Civilization

The study of the history of selected events, individuals, groups, institutions, artifacts, ideas, and other phenomena associated with the development of peoples and countries in which the English language predominates.

12.03 04 English Language and Contemporary Culture

The study of the patterns of behavior and beliefs commonly understood and shared by the people of those socioeconomic milieus or geographical locations where English is the dominant language.

12.03 05 English Language Structure and Grammar

The study of the meaning bearing units of the English language such as words, phrases, and sentences, and their identification and relationships.

12.03 06 Listening Comprehension in English

The study of the skills and techniques used to improve and measure what is heard and understood in learning the English language.

12.03 07 English Language Literature

The study of all writings in prose or verse, especially those of an imaginative or critical character, including biography, drama, essay, fiction, poetry, myths, and legends.

12.03 07 01 Literature in English by Author

The study of the approach to English literature through various authors.

12.03 07 02 Literature in English by Genre

The study of the approach to English literature through the various kinds or types of works such as drama, poetry, fiction, and essay.

12.03 07 03 Literature in English by Period

The study of the approach to English literature through the various time periods, such as 18th century or 20th century.

12.03 07 04 Literature in English by Place

The study of the approach to English literature according to geographical location, such as a country or city.

12.03 07 05 Literature in English by Theme

The study of the approach to English literature according to themes, such as freedom, courage, and sentimentality.

12.03 07 06 Literature in English by Other Categories

The study of English literature organized by other categories.

12.03 08 Reading in the English Language

The study of the theory, methods, and techniques in reading the English language.

12.03 08 01 Beginning Reading in English

The study of the activities involved in teaching pupils to read, following necessary readiness activities designed to develop understanding of the relationship between oral and written language, recognition of symbols (letters) and symbol-sound relationships, and appreciation of the reading process.

12.03 08 02 Developmental Reading in English

The study of the methods and techniques designed to help pupils sequentially develop all aspects of reading proficiency needed by a mature reader.

12.03 08 03 Reading Readiness in English

The study of the methods and techniques of developing in children the mental, physical, and emotional maturity prerequisite to instruction in reading, emphasizing direct and vicarious experiences involving oral language, such as listening, speech habits and patterns, sequential organization of ideas, vocabulary development, and experience with books and stories.

12.03 08 04 Remedial Reading in English

The study of the nature and use of diagnostic and remedial activities for individual pupils or groups of pupils, designed to correct and prevent further reading difficulties which interfere with the pupil's expected progress in developing reading skills, understandings, and appreciations.

12.03 09 Speaking the English Language

The study of the theory, methods, and skills that are essential for the proper speaking of the English language.

12.03 10 Writing the English Language

The study of the theory, methods, and skills that are needed for writing the English language.

12.03 10 01 English Language Composition

The study of the principles and techniques of selecting, combining, arranging, and developing ideas, and expressing them in appropriate written forms such as narration, description, exposition, or persuasion.

12.03 10 02 English Language Creative Writing

The study of the techniques of composition that involve some degree of spontaneity and exercise of the imagination on the part of the writer such as found in short stories, verse, drama, and personal forms of writing.

12.03 10 03 English Language Rhetoric and Style

The study and analysis of the effective use of language, including an examination of the patterned use of language for its effect.

12.03 10 04 English Language Technical Writing

The study of the theory, methods, and skills needed for writing scientific, research, or formal English.

12.03 10 05 English Language Writing Conventions and Usage

The study of the techniques of using basic writing skills, including handwriting, spelling, capitalization, punctuation, and appropriate word choice.

12.03 99 Other Study and Uses of the English Language (Specify)

12.04 AFRICAN LANGUAGES

The study of the language, literature, and culture of African peoples, such as Coptic, Berber, Ibo, Yoruba, Amharic, Hausa, Egyptian, and Swahili.

12.05 ARABIC

The study of the language, literature, and culture of Arabic-speaking peoples in the ancient and modern world.

12.05 41 Classical Arabic

The study of the language, literature, and culture of the ancient Arabic world.

12.05 42 Modern Standard Arabic

The study of the language, literature, and culture of Arabic-speaking people in the modern world.

12.06 ARTIFICIAL LANGUAGES

The study of and development of skills in reading, writing, and conversing in artificial languages such as Esperanto and Volapuk.

12.07 CHINESE

The study of the language, literature, and culture of Chinese-speaking people including Cantonese and Mandarin.

12.08 DANISH

The study of the language, literature, and culture of Danish-speaking people.

12.09 FINNISH

The study of the language, literature, and culture of the Finnish-speaking people.

12.10 FRENCH

The study of the language, literature, and culture of the French-speaking people.

12.11 GERMAN

The study of the language, literature, and culture of the German-speaking people.

12.12 GREEK

The study of the language, literature, and culture of Greek-speaking people, ancient and modern.

12.12 41 Classical Greek

The study of the language, literature, and culture of the ancient Greek world.

12.12 42 Modern Greek

The study of the language, literature, and culture of Greek-speaking people in the modern world.

12.12 43 New Testament Greek

The study of the Greek language as used in the New Testament.

12.13 HEBREW

The study of the language, literature, and culture of Hebrew-speaking people, ancient and modern.

12.13 41 Classical Hebrew

The study of the language, literature, and culture of the ancient Hebrew world.

12.13 42 Modern Hebrew

The study of the language, literature, and culture of the Hebrew-speaking people of the modern world.

12.14 ITALIAN

The study of the language, literature, and culture of the Italian-speaking people.

12.15 JAPANESE

The study of the language, literature, and culture of the Japanese-speaking people.

12.16 LATIN

The study of the language, literature, and culture of the ancient and medieval Roman world.

12.16 41 Classical Latin

The study of the language, literature, and culture of the ancient Roman world.

12.16 42 Medieval Latin

The study of the language, literature, and culture of the medieval European world.

12.17 NATIVE AMERICAN

The study of the languages, literatures, and cultures of the Indians of North America.

12.18 NORWEGIAN

The study of the language, literature, and culture of the Norwegian-speaking people.

12.19 PORTUGUESE

The study of the language, literature, and culture of the Portuguese-speaking people.

12.20 RUSSIAN

The study of the language, literature, and culture of the Russian-speaking people of the Soviet Union.

12.21 SANSKRIT

The study of the language and literature of Sanskrit.

12.22 SLAVIC LANGUAGES

The study of the languages, literatures, and cultures of Slavic peoples, including Polish, Czech, Serbo-Croatian, Slovenian, Bulgarian, and Ukrainian.

12.23 SOUTH ASIAN LANGUAGES

The study of the languages, literatures, and cultures of the South Asian peoples, such as Bengali and Hindi.

12.24 SOUTHEAST ASIAN LANGUAGES

The study of the languages, literatures, and cultures of Southeast Asian peoples, such as Laotian, Cambodian, Thai, and Vietnamese.

12.25 SPANISH

The study of the language, literature, and culture of the Spanish-speaking people.

12.26 SWEDISH

The study of the language, literature, and culture of the Swedish-speaking people.

12.27 YIDDISH

The study of the language, literature, and culture of the Yiddish-speaking people.

12.__ THE STUDY AND USES OF LANGUAGE* (INTERLAY)

The study of the skills and techniques essential to learning a language.

12.__01 Dialects of a Language (Synchronic and Diachronic)

The study of the written or spoken features of a language such as sounds, forms, constructions, and words, as they vary individually or in related groups with respect to their geographic or social distribution. The study may be synchronic (of a single point in time) or diachronic (historical).

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The study of the ways in which the various dialects developed in the course of time into a language, including the influence of nonlinguistic factors such as social and political change and the processes of general language change as they affected a specific language.

12.__03 A Language and a Civilization

The study of the history of selected events, individuals, groups, institutions, artifacts, ideas, and other phenomena associated with the development of peoples and countries in which a language is predominant.

12.__04 Language and a Contemporary Culture

The study of the patterns of behavior and beliefs commonly understood and shared by the people of a given socioeconomic milieu or geographical location in which a language is predominant.

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The study of the meaning bearing units of a language such as morphemes, words, phrases, and sentences, and their identification and relationships.

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*The blank is used to code the appropriate language.

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The study of all writings in prose or verse, especially those of an imaginative or critical character, including biography, drama, essay, fiction, poetry, myths, and legends.

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The study of the nature and use of diagnostic and remedial activities for individual pupils or groups of pupils, designed to correct and prevent further reading difficulties which interfere with the pupil's expected progress in developing reading skills, understandings, and appreciations.

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The study of the principles and techniques of selecting, combining, arranging and developing ideas, and expressing them in appropriate written forms such as narration, description, exposition, or persuasion.

12.__10 02 Creative Writing

The study of the techniques of composition that involve some degree of spontaneity and exercise of the imagination on the part of the writer such as found in short stories, verse, drama, and personal forms of writing.

12.__10 03 Rhetoric and Style

The study and analysis of the effective use of language, including an examination of the patterned use of language for its effect.

12.__10 04 Technical Writing

The study of the theory, methods, and skills needed for writing scientific, research, or formal language.

12.__10 05 Writing Conventions and Usage

The study of the techniques of using basic writing skills, including handwriting, spelling, capitalization, punctuation, and appropriate word choice.

12.__99 Other Study and Uses of Language (Specify)

12.99 OTHER LANGUAGE, LINGUISTICS, AND LITERATURE (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN LANGUAGE, LINGUISTICS, AND LITERATURE, SEE APPENDIX E.

13 LAW

Subject matter concerned with the principles and procedures developed and enforced by institutions of government, for the social order, in the form of legislation, decisions, regulations, and orders.

13.01 CIVIL AND ADMINISTRATIVE PROCEDURE

The study of the jurisdiction, procedures, and remedies of civil courts and administrative agencies.

13.01 01 Administrative Law

The study of administrative agencies created by government, especially the procedures employed by such agencies and the legal and political control of agency authority.

13.01 02 Conflict of Laws

The study of the jurisdiction of tribunals, the choice of rules of law, and the force of judgments, in cases involving transactions touching two or more states or nations.

13.01 03 Evidence

The study of the manner in which facts are proved at trial or in hearings in courts or administrative agencies, including the introduction and exclusion of evidence through witnesses and documents.

13.01 04 Federal Courts

The study of the manner in which judicial and lawmaking authority is allocated between Federal and State courts, and the rules of jurisdiction and procedure in the Federal courts.

13.01 05 Remedies: Legal and Equitable

The study of the remedies issued by courts and administrative agencies to redress legal wrongs, including those historically administered by law courts, such as damages, and by equity courts, such as injunctions and specific performance.

13.01 99 Other Civil and Administrative Procedure (Specify)

13.02 COMMERCIAL LAW

The study of the law of agreements, other transactions and related matters in trade or business.

13.02 01 Law of Commercial Paper

The study of the laws governing the use and form of notes, drafts, checks, certificates of deposits, transfer, rights of holders, liability of parties, and discharge.

13.02 02 Law of Contracts

The study of the formation and legal effect of agreements, including their interpretation, enforcement, performance, and remedies for their breach.

13.02 03 Debtor-Creditor Relations Law

The study of the enforcement of the rights and remedies of unsecured creditors and debtors such as attachment, garnishment, repossession, exemptions, fraudulent conveyances, compositions, assignment, creditor's bills, judgments, execution, receivership, and bankruptcy.

13.02 04 Government Contracts Law

The study of the legal aspects of contracts made by governmental agencies or pursuant to governmental authority.

13.02 05 Insurance Law

The study of the laws governing the arrangement for risk transference and distribution of loss, including the formation of the arrangement, interpretation of contracts, identification of persons and interests protected, and the disposition of claims.

13.02 06 Sales-of-Goods Law

The study of the law governing the rights and remedies arising out of agreements to transfer a property interest in goods.

13.02 07 Law of Secured Transactions

The study of the laws governing the rights arising from the use of secured credit devices for personal property, including filing, conditional sales, assignments of accounts receivable, and attachment, bankruptcy, priorities, and disposition.

13.02 99 Other Commercial Law (Specify)

13.03 CONSTITUTIONAL LAW

The study of the law concerned with the constitutional systems of the United States in terms of the judicial function in constitutional cases, federalism and the respective powers of the Federal and State governments, separation of powers among the three branches of the Federal government, and the limitations imposed upon the power of the Federal and State governments for the protection of individual rights.

13.03 01 Church-State Relations

The study of the law as it relates to interface between religious groups or individuals and the Federal or State governments arising under constitutional guarantees provided by religion clauses of the First Amendment and various State constitutions.

13.03 02 Civil Liberties

The study of the law governing those rights guaranteed persons under constitutions that limit the power of Federal and State governments over the individual.

13.03 03 Federalism

The study of the law that governs political organizations that unite separate units into a Federal system which exercises certain powers, while preserving the political integrity of each of its parts.

13.03 04 Separation of Powers

The study of the law concerned with allocation of power among legislative, executive, and judicial processes of decision-making within any given jurisdiction.

13.03 99 Other Constitutional Law (Specify)

13.04 CRIMINAL LAW

The study of criminal offenses and the rules and procedures governing the investigation, prosecution, and disposition of those charged with such offenses.

13.04 01 Crimes

The study of the law concerned with acts of commission or omission against the person, and against property, which have been proscribed by society and for which legal sanctions are imposed.

13.04 02 Criminal Procedure and Evidence

The study of the legal rules governing the operation of the criminal justice system and the application of substantive criminal law to the individual, such as a consideration of the prerogatives of and limitations upon the State in the restraint of an individual's liberty, the acquisition and use of facts, the filing of criminal pleadings, and the conduct of the trial proceedings.

13.04 03 Juvenile Justice

The study of the laws and procedures which are applied to and administered regarding those who, by statute, have not reached adulthood, including a consideration of courts, intake facilities, clinical services, community service agencies, and correctional institutions specifically created to deal with youths accused of criminal offenses.

13.04 04 Sentencing, Probation, and Parole

The study of the law relating to the determination of when, to whom, and what sanctions should be imposed on those deemed guilty of criminal offenses, and when and under what conditions and by whom a release from those sanctions should occur.

13.04 99 Other Criminal Law (Specify)

13.05 GOVERNMENTAL REGULATION OF BUSINESS

The study of the law concerned with governmental controls over the conduct of the commercial affairs of persons and business organizations.

13.05 01 Anti-Trust Law

The study of control, through law, of private economic power for the purpose of promoting and regulating

competition, including common law remedies against restraints on trade and statutes to control monopolies, price discrimination, boycotts, cartels, patents, tie-in arrangements, price fixing, refusal to deal, resale price maintenance, price leadership, vertical restraints, mergers, consent judgments, remedies, and dissolution.

13.05 02 Law of Regulated Industries

The study of the law governing the regulation of various industries including licensing, rates and fair return, quality of service, control of service, coordination of services, mergers and financial practices.

13.05 03 Securities Regulation Law

The study of the laws regulating distribution and trading in stocks, bonds, and other securities.

13.05 99 Other Governmental Regulation of Business (Specify)

13.06 INTERNATIONAL LAW

The study of the law concerned with the rules, institutions, and procedures governing transactions, relationships, and events that affect two or more nation-states or cut across national boundaries.

13.06 01 Public International Law

The study of the law concerned with the rules, institutions, and procedures governing international relations and the conduct of nation-states and other entities, including the process of law-creation through custom and treaty; jurisdiction of states over territory, resources, and persons; the law of the sea; the law governing the use of force, war, and neutrality; international protection of human rights; and procedures for settling international disputes.

13.06 02 Private International Law

The study of the legal rules and processes by which the courts of one country give effect to the laws and adjudications of courts or other authorities of another country, and to international rules governing commercial transactions that cut across national boundaries.

13.06 03 Law of International Organizations

The study of the laws, agreements, and other accords relating to the structure, procedures, and functioning of multinational organizations established by nation-states, including rights of membership and participation, authority and jurisdiction, legal effects of decisions, immunities and privileges, voting procedures, and relationships to national legal systems.

13.06 99 Other International Law (Specify)

13.07 LAW OF BUSINESS AND OTHER ORGANIZATIONS

The study of the law dealing with the organization, powers, rights, and liabilities of business and other organizations.

13.07 01 Agency Law

The study of the law concerning the relationship between two persons whereby one is given authority to act on behalf of, and to create rights and liabilities for, the other.

13.07 02 Law of Associations

The study of variously chartered or unchartered business organizations which persons form and join to carry out a particular purpose.

13.07 03 Law of Corporations

The study of the characteristics, purposes, and powers of corporations and their organization, financing, control, and management.

13.07 04 Law of Partnerships

The study of the nature, purposes, formation, and dissolution of partnerships, and of the rights and liabilities of the partnership and its members.

13.07 99 Other Law of Business and Other Organizations (Specify)

13.08 PERSPECTIVES ON LAW

The study of law or of a particular legal system in a broader context, including historical, philosophical, or comparative analysis.

13.08 01 Comparative Law

The comparative study of the sources, concepts, and methods of different historical or contemporary legal systems.

13.08 02 Jurisprudence

The study of philosophical issues relating to the nature, sources, and purposes of the law, including the nature of legal reasoning, justice and social order, welfare, legal and political obligation, and punishment.

13.08 03 Legal History

The study of the development of law and legal institutions, giving attention to the political, social, economic, and intellectual factors determining such development.

13.08 04 Foreign Legal Systems

The study of legal systems other than those of the United States.

13.08 05 Roman Law

The study of the laws and the legal system developed by ancient Rome.

13.08 06 Jewish Law

The study of the Hebrew legal heritage from earliest times to the present with special emphasis on Talmudic Law.

13.08 99 Other Perspectives on Law (Specify)

13.09 PROPERTY LAW

The study of the legal rules pertaining to the acquisition, management, transfer, inheritance, and financing of interests in real and personal property.

13.09 01 Law of Possession and Title

The study of the fundamentals of common law rules relative to the acquisition and protection of interests in property, including rights of finders, bailment, accession, confusion, estates in land, joint tenancies, easements, and restrictive covenants.

13.09 02 Transfer of Property Law

The study of the law affecting the inter vivos transfer of interests in property and the rights of the parties thereto, including gifts, sales contracts, deeds, warranties, and the recording acts.

13.09 03 Landlord-Tenant Law

The study of the laws and regulations affecting the rights, duties, and responsibilities of landlords and tenants, including rights to possession, creation and termination of leases, assignments and subleases, rent control laws, duty to make repairs, and liability for injuries on the premises.

13.09 04 Community Property Law

The study of the laws in certain States which grant special rights to spouses with respect to property acquired during marriage, including rights on dissolution of marriage by death or divorce, management powers during marriage, and provisions for debt satisfaction during and after marriage.

13.09 05 Law of Real Estate Financing

The study of the law regulating the interests of moneylenders, sellers, and buyers in and to real property purchased on time, including mortgages, installment contracts, vendor's liens, and commercial developments of land.

13.09 06 Intellectual Property Law

The study of laws relating to the acquisition and transfer of interests in inventions, works of art, and ideas, and the laws affecting such interests, including patents, copyrights, and trademarks.

13.09 07 Law of Wills and Estates

The study of statutory laws regulating the devolution of property on death and the requirements for a valid will, including the various schemes for distribution of property of heirs, execution and revocation of wills, construction of terms used in wills, appointment and regulation of personal representatives, and administration of estates.

13.09 08 Law of Trusts and Trust Administration

The study of the laws relating to the establishment, management, and termination of trusts, including the common law elements of a trust, statutory requirements for enforceability, assignability of interests, duration and termination, and duties, powers, and liabilities of trustees.

13.09 99 Other Property Law (Specify)

13.10 REGULATION OF EMPLOYMENT RELATIONS

The study of the legal rules and procedures which regulate the relationships between employers and employees.

13.10 01 Employment Discrimination Laws

The study of constitutional and other legal limitations on discrimination in employment on the basis of race, national origin, sex, or age, including the procedures and remedies used to implement those limitations.

13.10 02 Fair Labor Standards

The study of wage and hour laws, including minimum and overtime pay, child labor standards, and the pertinent recordkeeping and enforcement machinery.

13.10 03 Retirement Benefits Law

The study of the legal regulation of social security and other pension plans, both private and governmental, available to workers whose employment is terminated by reason of age.

13.10 04 Safety and Health Law

The study of the legal rules designed to secure a safe and healthy work environment, including the procedures and remedies used to implement those rules.

13.10 05 Law of Unionization and Collective Bargaining

The study of the legal rules and procedures for the regulation of employers, employees, and unions in their industrial relations, including the formation and operation of unions, the use of strikes, lockouts, picketing and other economic weapons, and the establishment of working conditions through collective bargaining.

13.10 99 Other Regulation of Employment Relations (Specify)

13.11 REGULATION OF THE ENVIRONMENT

The study of legal rules and regulations governing the use of property by government, business organizations, and individuals as such use affects the condition, appearance, and enjoyment of the environment.

13.11 01 Environmental Law

The study of State and Federal rules and regulations affecting the quality of the environment, including common law concept of nuisance, clean air acts, water quality acts, and environmental policy acts.

13.11 02 Law of Land Use Planning

The study of local, State, and Federal rules and regulations affecting the private use of real property, including zoning, subdivision regulation, comprehensive planning and federal control of interstate sales of real property.

13.11 99 Other Regulation of the Environment (Specify)

13.12 TAXATION LAW

The study of the laws and regulations promulgated by State and Federal government imposing a charge—for the support of that government—on the acquisition, use, and transfer of property, goods, and services, and the determination of an amount for the charge.

13.12 01 Federal Estate and Gift Tax Law

The study of the Federal laws which assess a tax upon the transfer of property during life by gift, or upon the transfer of property that a decedent owned or had an interest in at death.

13.12 02 Federal Income Tax Law

The study of the Federal laws which assess a tax upon the income earned by an individual, trust, partnership, association, or corporation.

13.12 03 State and Local Taxation Laws

The study of the State and local laws which assess a tax upon the receipt of income earned by an individual, trust, partnership, association, or corporation, the purchase and use of goods, the ownership of personal and real property, the right to engage in specific occupations, and the right to obtain services provided by State or local governments.

13.12 99 Other Taxation Law (Specify)

13.13 TORTS

The study of wrongful acts other than breaches of contract, resulting in damage or threatened damage to persons or property covered under the areas of intent, negligence, or strict liability, as well as the areas of nuisance, misrepresentation, defamation and slander, invasion of privacy, products liability, and interference with business relationships, including unfair competition.

13.13 01 Intentional Torts

The study of laws regarding compensation for injury to persons or property resulting from intentional misconduct or interferences.

13.13 02 Negligence

The study of laws relating to compensation for injury to persons or property resulting from the unreasonable conduct or negligent interference of others.

13.13 03 Strict Liability

The study of laws relating to compensation in the absence of any negligence or any intent which the law finds wrongful for injury to persons or property resulting from the management or control of activities regarded as useful but highly dangerous.

13.13 04 Products Liability

The study of laws relating to compensation for injury to persons or property resulting from the manufacture or sale of defective products.

13.13 05 Unfair Trade

The study of laws relating to compensation for injury to persons, property, or reputation arising out of business activities regarded as improper.

13.13 06 Reputational Tort

The study of laws relating to compensation for injury to reputation or property resulting from the libelous or slanderous misconduct, or defamation of others.

13.13 99 Other Torts (Specify)

13.14 LEGAL PROFESSION

The study of the organized bar, the delivery of legal services to the public, and the professional responsibilities of the attorney.

13.14 01 Professional Responsibility

The study of the ethical obligations and standards of conduct applicable to members of the legal profession in their relations with clients, the courts, other lawyers, and the public including the role of lawyers in an adversarial system, questions arising from rules providing for confidentiality of disclosures made to lawyers by clients, conflicts of interest problems confronted by lawyers, and the role of lawyers in providing for the provision of legal services to the public.

13.14 02 Legal Ethics

The study of the ethical obligations and standards of conduct applicable to members of the legal profession in their relations with clients, the courts, other lawyers, and the public.

13.14 03 Structure of the Legal Profession

The study of the history, structure, and functions of the legal profession, including the methods employed for delivering legal services to the public.

13.14 99 Other Legal Profession (Specify)

13.15 LEGAL SKILLS

The study and development of the techniques and skills employed by members of the legal profession in the pursuit of the profession.

13.15 01 Case and Statutory Analysis

The study and development of the skills employed by members of the legal profession in the analysis and interpretation of primary legal sources such as judicial and administrative opinions, statutes, and regulations.

13.15 02 Legal Bibliography

The study and development of the skills employed by members of the legal profession in the use of library and other research materials.

13.15 03 Interviewing and Counseling

The study and development of the skills employed by members of the legal profession in the interviewing and counseling of clients.

13.15 04 Drafting of Legal Instruments

The study and development of the skills employed by members of the legal profession in the preparation of written instruments.

13.15 05 Negotiation and Mediation

The study and development of the skills employed by members of the legal profession in resolving disputed claims or adjusting conflicting interests through negotiation or through third-party mediation and conciliation.

13.15 06 Advocacy

The study and development of the skills employed by members of the legal profession in presenting arguments in support of a client's position before agencies empowered to determine legal rights and duties, such as courts, administrative tribunals, and arbitrators.

13.15 99 Other Legal Skills (Specify)

13.16 DOMESTIC RELATIONS LAW

The study of the law which affects relationships between husband and wife, and parent and child, including the obligations imposed by marriage, divorce, dissolution of marriage, or separation, such as the support of spouses and children during marriage and division of property and support of children and former spouses upon divorce, Paternity and adoption of children is included in the study.

13.17 ADMIRALTY

The study of the body of legal rules and practices governing the business of carrying goods and passengers at sea.

13.18 LAW OF STATE AND LOCAL GOVERNMENTS

The study of the structure, financing, territorial definition, and scope and distribution of power of State and local government units, and the legal issues arising from the administration of State and local governments.

13.19 PUBLIC WELFARE LAW

The study of the laws and regulations governing the administration of public assistance to welfare recipients and the legal problems arising therefrom.

13.99 OTHER LAW (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN LAW, SEE APPENDIX E.

14 LIBRARIES AND MUSEUMS

Subject matter concerned with the knowledge and skills required to develop, organize, store, retrieve, administer, and facilitate the use of collections of information in such formats as books, documents, manuscripts, machine readable data bases, filmed and recorded materials, specimens, artifacts, and other objects of permanent value.

14.01 LIBRARY SCIENCE

The study of those subjects concerned with the attitudes, knowledge, and skills required to develop, organize, administer, store and retrieve, and facilitate the use of library materials and libraries.

14.01 01 History of Libraries

The study of the sequential development and evolution of libraries as repositories of books, documents, manuscripts, publications, and other materials for reading, study, or reference, including the functional design and utilization of such facilities.

14.01 02 History of Printing and Books

The study of the sequential development and evolution of the process of marking or making impressions from inked type, blocks, and plates, and of the use and purpose of the written products of such processes, including books.

14.01 99 Other Library Science (Specify)

14.02 MUSEOLOGY

The study of those subjects concerned with the attitudes, knowledge, and skills requried to develop, organize, administer, store and retrieve, and facilitate the use of museums and museum materials including art galleries and zoological gardens.

14.03 ADMINISTRATION OF LIBRARIES AND MUSEUMS

The study of management applications and trends, organizational structure, decisionmaking processes, economic trends, and management of personnel and finance in libraries and museums.

14.03 01 Academic Library Administration

The study of the organization and administration of learning resource centers and libraries in postsecondary institutions and research centers.

14.03 02 Art Gallery Administration

The study of the administration of art galleries and their services, including collecting, restoring, preserving, maintaining and exhibiting art objects, artifacts, paintings, portraits and other artistic renditions, and furnishing information of historical, artistic, and general public interest.

14.03 03 Library Administration

The study of the administration of libraries and related services including collecting, preserving, maintaining, and furnishing information of historical, artistic, scientific, or technological significance, or of general public interest.

14.03 04 Multilibrary Systems Administration

The study of the organization and administration of interorganizational arrangements such as consortia, networks, and cooperative plans among libraries and among other information agencies.

14.03 05 Museum Administration

The study of the administration of museums, art galleries, and botanical and zoological gardens and related services, including collecting, authenticating, preserving, maintaining, exhibiting, and furnishing information on collections of historical, artistic, scientific, or technological significance, or of general public interest.

14.03 06 Public Library Administration

The study of the organization and administration of the public library as a governmental administrative and service agency. Included for study are economic trends, forms of control, structure, adult education standards, and problems of measurement.

14.03 07 School Library and Media Center Administration

The study of the organization and administration of school libraries and media centers, including supervision and functional requirements of libraries and media centers at local, district, and regional levels, and standards and problems of measurement.

14.03 08 Special Library Administration

The study of the organization and administration of libraries devoted to specific disciplines or users.

14.03 08 01 Art Library Administration

The study of the organization and administration of art libraries, including art research methods and materials.

14.03 08 02 Business Library Administration

The study of the organization and administration of business libraries, including business research methods and materials.

14.03 08 03 Law Library Administration

The study of the organization and administration of law libraries, including legal research methods and materials.

14.03 08 04 Medical Library Administration

The study of the organization and administration of medical libraries, including medical research methods and materials.

14.03 08 05 Music Library Administration

The study of the organization and administration of music libraries, including music research methods and materials.

14.03 08 06 Science and Technology Library Administration

The study of the organization and administration of science and technology libraries, including scientific and technical research methods and materials.

14.03 08 07 Theological Library Administration

The study of the organization and administration of theological libraries, including theological research methods and materials.

14.03 09 Zoological Garden Administration

The study of the organization and administration of zoological gardens, including current trends, modern techniques of communication, research, evaluation, and planning for future services.

14.03 99 Other Administration of Libraries and Museums (Specify)

14.04 COLLECTION MANAGEMENT

The study of the preparation, classification, maintenance, and cataloging of materials in libraries and museums.

14.04 01 Cataloging of Collections

The study of the principles, techniques, and skills necessary to describe the physical characteristics, and identify the subject relationship of information resources in libraries and museums.

14.04 02 Classification of Collections

The study of the principles, techniques, and skills necessary to organize all library and museum formats of information resources for retrieval.

14.04 03 Maintenance of Collections

The study of the principles and techniques of keeping library and museum materials in all formats in usable condition.

14.04 04 Preservation of Collections

The study of the principles and techniques of protecting library and museum materials in all formats from destruction.

14.04 05 Registration and Documentation of Collections

The study of the principles and techniques of officially recording library and museum formats and verifying their authenticity.

14.04 06 Restoration of Collections

The study of the principles and techniques of renewing or returning library or museum materials to their former, normal, or original unimpaired condition.

14.04 07 Security of Collections

The study of the principles and techniques of protection and precaution for reducing the risks of theft, vandalism, fire, or other damage to persons or objects in libraries and museums.

14.04 08 Selection and Acquisition of Collections

The study of the principles, techniques, and skills necessary for acquiring all formats of library or museum information resources, including the principles and processes necessary for identification, evaluation, and selection.

14.04 09 Storage of Collections

The study of the principles and techniques of depositing usable library and museum materials not readily in use for safe keeping.

14.04 10 Automated Collection Management Systems

The study of the function and use of mechanical, magnetic, electrical, or other equipment that is used in the preparation, classification, maintenance, and cataloging of materials in libraries and museums.

14.04 99 Other Collection Management (Specify)

14.05 EQUIPMENT FOR LIBRARIES AND MUSEUMS

The study of electronic technology, automation, apparatus, furnishings, and other items required to operate libraries and museums.

14.05 01 Audio Equipment

The study of the use of sound equipment in libraries and museums.

14.05 02 Video and Visual Equipment

The study of the use of electronic equipment in libraries and museums which transmits visual images as in television, motion pictures, films, slides, and photographs.

14.05 99 Other Equipment for Libraries and Museums (Specify)

14.06 FACILITIES FOR LIBRARIES AND MUSEUMS

The study of the methods of planning, arranging, budgeting for, and utilizing space in library and museum facilities.

14.06 01 Environmental Requirements

The study of the heat, light, and other physical requirements necessary for storing, maintaining, and displaying materials in library and museum facilities.

14.06 02 Space Requirements

The study of factors essential to determination of need for space and its utilization required for storing, maintaining, and displaying materials in library and museum facilities.

14.06 99 Other Facilities for Libraries and Museums (Specify)

14.07 MATERIALS FOR LIBRARIES AND MUSEUMS

The study of the characteristics of various forms of information and materials found in libraries and museums and the problems related to the collection, organization, management, control, and administration of those materials.

14.07 01 Archives

The study of the collection, organization, preservation, service, and retrieval of public records, documents of historical significance, and other archival materials.

14.07 02 Artifacts and Specimens

The study of the selection, evaluation, organization, and preservation of manmade objects or artifacts and of samples or specimens of animals, plants, or minerals collected for study.

14.07 03 Bibliographies

The study of author, subject, and area bibliographies, as well as the strategy and techniques for constructing bibliographies.

14.07 04 Books

The study of the selection, evaluation, organization, and preservation of treatises, novels, or other forms of books.

14.07 05 Documents

The study of the selection, evaluation, organization, control, and administration of official publications of local, State, and national governments, as well as foreign, domestic, and international agencies.

14.07 06 Journals

The study of the selection, evaluation, organization, and control of periodicals, magazines, daily newspapers, and journals.

14.07 07 Manuscripts

The study of the collection, organization, preservation, service, and retrieval of original manuscript source materials.

14.07 08 Material Production

The study of the techniques used in the production of material in libraries, museums, and information centers.

14.07 09 Nonprint Materials

The study of the selection, evaluation, organization, control, and use of films, recordings, and other nonprinted materials.

14.07 99 Other Materials for Libraries and Museums (Specify)

14.08 LIBRARY AND MUSEUM SERVICES AND FUNCTIONS

The study of the principles, techniques, and attitudes necessary to facilitate the use of libraries and museums by individuals or groups.

14.08 01 Advisory Services

The study of methods and techniques for evaluating users' and visitors' needs and interests and for providing guidance in the use of the libraries and museums and their contents to meet these needs.

14.08 02 Library and Museum Exhibits

The study of the methods and techniques of displaying materials for public viewing in libraries and museums.

14.08 03 Public Education Services and Functions

The study of the essential techniques, knowledge, and attitudes that are needed to provide services to public education patrons in libraries, museums, and information centers.

14.08 04 Reference and Retrieval

The study of the knowledge, principles, and techniques necessary to determine the user's needs, assist in identifying and interpreting pertinent information as required by the user, and to recover such information from storage.

14.08 05 Story Telling

The study of the knowledge, principles, and techniques necessary to transmit narrative in prose or verse to interest, amuse, or instruct a variety of users of libraries or museums.

14.08 99 Other Library and Museum Services and Functions (Specify)

14.09 LIBRARY AND MUSEUM USER GROUPS

The study of the characteristics, needs, and attitudes of groups and individuals who avail themselves of the materials, services, and functions that are provided by libraries and museums.

14.09 01 Preschool Users

The study of the characteristics, needs, and attitudes of groups and individuals who have not yet reached the age of compulsory school attendance and who use the materials, services, and functions of libraries and museums.

14.09 02 Children Users

The study of the characteristics, needs, and attitudes of groups and individuals of school age who use the materials, services, and functions of libraries and museums.

14.09 03 Adolescent Users

The study of the characteristics, needs, and attitudes of groups and individuals who have not yet reached the age of majority or adulthood and who use the materials, services, and functions of libraries and museums.

14.09 04 Adult Users

The study of the characteristics, needs, and attitudes of groups and individuals who are considered adults and who use the materials, services, and functions of libraries and museums for recreation or research, or for the purpose of increasing their knowledge.

14.09 05 Handicapped Users

The study of the characteristics, needs, and attitudes of groups and individuals who are mentally retarded, hard of hearing, visually handicapped, emotionally disturbed, or otherwise health impaired and who by reason thereof require special education and related services to assist them in using the materials, services, and functions of libraries and museums.

14.09 06 Disadvantaged Users

The study of the characteristics, needs, and attitudes of groups and individuals who are disadvantaged because of academic, socioeconomic, or cultural position and who use the materials, services, and functions of libraries and museums.

14.09 07 Minority Users

The study of the characteristics, needs, and attitudes of groups and individuals who are members of any recognizable racial, religious, or ethnic group that suffers some disadvantage due to prejudice or discrimination and who use the materials, services, and functions of libraries and museums.

14.09 08 Senior Citizen Users

The study of the characteristics, needs, and attitudes of groups and individuals who are generally retired or over 65 years of age and who use the materials, services, and functions of libraries and museums.

14.09 09 Vocational-Technical Institute Users

The study of the characteristics, needs, and attitudes of groups and individuals who are enrolled in a vocational-technical institute and who use the materials, services, and functions of libraries and museums associated with their institution.

14.09 10 Community and Junior College Users

The study of the characteristics, needs, and attitudes of groups and individuals who are enrolled in a community or junior college and who use the materials, services, and functions of libraries and museums associated with their institution.

14.09 11 College and University Users

The study of the characteristics, needs, and attitudes of groups and individuals who are enrolled in a college or university and who use the materials, services, and functions of libraries and museums associated with their institution.

14.09 12 Research Institute Users

The study of the characteristics, needs, and attitudes of groups and individuals who are affiliated with a research institute or who are actively engaged in research and who use the materials, services, and functions of libraries and museums.

14.09 99 Other Library and Museum User Groups (Specify)

14.99 OTHER LIBRARIES AND MUSEUMS (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN LIBRARIES AND MUSEUMS, SEE APPENDIX E.

15 LIFE SCIENCES AND PHYSICAL SCIENCES

Subject matter concerned with the systematic study of living organisms and inanimate objects, processes of matter, energy, and associated phenomena.

15.01 ASTRONOMY

The study of matter and energy in the universe, including the solar system, stars, galaxies, and nebula.

15.01 01 Cosmology (See 18.06 01 – Cosmology)

The study of principles, theories, and philosophy concerned with the nature of the universe as a whole, including its origin and evolution.

15.01 02 Solar Astronomy

The study of the sun and the astronomical bodies that orbit it, including their positions, dimensions, motion, composition, and evolution.

15.01 03 Stellar Astronomy

The study of the stars and their positions, dimensions, motions, composition, and evolution.

15.01 99 Other Astronomy (Specify)

15.02 ATMOSPHERIC SCIENCES

The study of the chemical and physical properties of the mass of air surrounding the earth.

15.02 01 Climatology

The study of climates, including their causes and effects, classification, and regional or global influences.

15.02 02 Meteorology

The study of weather, including air masses and their motions, temperature, atmospheric pressure, clouds, and precipitation, and their relatively short-term interrelations on local, regional, and global scales.

15.02 99 Other Atmospheric Sciences (Specify)

15.03 BIOLOGY

The study of life, including the structure, function, reproduction, growth, heredity, evolution, behavior, and distribution of living organisms.

15.03 01 Biological Behavior

The study of the responses of living organisms to a variety of stimuli.

15.03 02 Cell Biology

The study of the cell as a unit of organization in plants and animals.

15.03 03 Developmental Biology

The study of the development of organisms, including growth, differentiation, and morphogenesis.

15.03 04 Ecology

The study of the interrelationships among organisms and their environments.

15.03 05 Embryology (See 09.01 05 – Embryology)

The study of the growth, development, structure, and functions of embryos.

15.03 06 Evolution

The study of the genetic changes through which groups of organisms acquire morphological, physiological, and behavioral characteristics which distinguish them from other living things.

15.03 07 General Genetics

The study of the inheritance of traits and characteristics of organisms.

15.03 08 Histology (See 09.01 09 – Histology)

The study of the tissues of organisms through selection and preparation of microscopic sections.

15.03 09 Limnology

The study of the nature and interrelationships of freshwater organisms and their aquatic environments.

15.03 10 Marine Biology

The study of the nature and interrelationships of salt water organisms and their aquatic environments.

15.03 11 Microbiology (See 09.01 14 – Microbiology)

The study of micro-organisms including bacteria, viruses, protista, protozoans, and certain fungi.

15.03 12 Molecular Biology

The study of the molecular structure and processes of living organisms.

15.03 13 Parasitology (See 09.01 14 03 – Parasitology)

The study of the structure, reproduction, development, distribution, and control of plant and animal parasites.

15.03 14 Radiobiology

The study of the nature and effects of radiation on organisms and biological systems.

15.03 15 Taxonomy and Systematics

The study of the identification, naming, and classification of organisms.

15.03 16 General Botany

The study of the structure, function, reproduction, growth, heredity, evolution, and distribution of plant life.

15.03 17 Bacteriology (See 09.01 14 01 – Bacteriology)

The study of the morphology, physiology, metabolism, and growth of bacteria, and their effects upon substances and other organisms.

15.03 18 Mycology (See 09.01 14 02 – Mycology)

The study of the morphology, physiology, taxonomy, and ecology of fungi.

15.03 19 Phycology

The study of the morphology, physiology, taxonomy, and ecology of algae.

15.03 20 Plant Genetics

The study of the inheritance of traits and characteristics in plants.

15.03 21 Plant Pathology

The study of the nature, causes, and development of plant diseases.

15.03 22 Plant Physiology

The study of plant functions, including such metabolic processes as photosynthesis, respiration, assimilation, and transpiration.

15.03 23 General Zoology

The study of animals, including their structure, function, reproduction, growth, heredity, evolution, behavior, and distribution.

15.03 24 Animal Anatomy

The study of the structure of animals including their tissues, organs, and systems.

15.03 25 Animal Behavior

The study of the responses of animals to a variety of stimuli.

15.03 26 Animal Genetics

The study of the inheritance of traits and characteristics of animals.

15.03 27 Entomology

The study of insects, including their life cycle, morphology, physiology, ecology, and taxonomy.

15.03 28 Herpetology

The study of reptiles and amphibia, including their morphology, physiology, ecology, and taxonomy.

15.03 29 Icthyology

The study of the fishes, including their life cycle, morphology, physiology, ecology, and taxonomy.

15.03 30 Mammology

The study of mammals, including their life cycle, morphology, physiology, ecology, and taxonomy.

15.03 31 Ornithology

The study of birds, including their life cycle, morphology, physiology, ecology, and taxonomy.

15.03 32 Animal Pathology

The study of the nature, causes, and development of animal diseases.

15.03 33 Animal Physiology

The study of animal functions, including metabolic processes such as respiration, digestion, excretion, reproduction, and circulation.

15.03 99 Other Biology (Specify)

15.04 CHEMISTRY

The study of the micro and macro structure of matter, of the changes matter undergoes, of the energy involved in these changes, and of the models that interpret and the theories and laws that describe these phenomena.

15.04 01 General Chemistry

The study of properties of and changes in matter with emphasis on interpretations at the molecular level, serving as the usual introduction to further work in chemistry.

15.04 02 Analytical Chemistry

The study of the chemical and physical methods and techniques needed to qualitatively, quantitatively, and often structurally characterize a sample, including the proper procedures for obtaining representative samples for analyses and the statistical procedures for evaluating the precision and accuracy of the results.

15.04 03 Biochemistry (See 09.01 02 – Biochemistry)

The study of the chemistry of living systems, including the isolation, characterization, and definition of the role of substances associated with processes taking place in living systems, and the study of the biological phenomena that result from the interactions, including energy changes among these substances.

15.04 04 Electrochemistry

The study of electrochemical phenomena and the reactions occurring when electrons are transferred from one substance to another, including electrode potentials, electrochemical cells, current-voltage-time relationships, and the interconversion of electrical and chemical energy.

15.04 05 Inorganic Chemistry

The study of all the elements and their compounds, including the isolation, compositions, structures, physical and spectroscopic properties, syntheses, energy relationships, and chemical transformations of these substances, but excluding the hydrocarbons and most of their derivatives.

15.04 06 Macromolecular Chemistry

The study of the synthesis, structure, reactions, properties, and uses of substances composed of large molecules formed from repeating units of smaller molecules or molecular fragments. Such macromolecules (polymers) may be organic or inorganic and may be of synthetic or natural origin, and their study includes their characterization both in solution and in the solid state, and the relationships among reaction variables, physical properties, and use characteristics.

15.04 07 Nuclear Chemistry and Radiochemistry

The study of atomic nuclei, including their natural and induced disintegration, fusion and fission processes, the associated radiation of sub-atomic particles and their detection and measurement, and their energy relationships.

15.04 08 Organic Chemistry

The study of the hydrocarbons and their derivatives, either synthetic or produced by living organisms, including the isolation, compositions, structures, physical and spectroscopic properties, syntheses, energy relationships, and chemical transformations of these substances.

15.04 09 Physical Chemistry

The study of the theoretical and experimental investigation of matter, with emphasis on the most fundamental aspects of structure and bonding, and the relationships to the mechanisms and energy changes of transformations.

15.04 10 Surface Chemistry

The study of the unique properties of surfaces, including the analysis of the surface layer, the preparation of ultrapure surfaces, and the catalytic properties of surfaces.

15.04 11 Specialized Areas of Chemistry

Areas of chemistry not reflected in the above categories that include chemical oceanography, chemistry of genetics, clinical chemistry, cosmo-chemistry, crystallographic chemistry, ecological chemistry, forensic chemistry, geochemistry, industrial chemistry, magnetic chemistry, marine chemistry, materials science, medicinal chemistry, molecular spectroscopy, organometallic chemistry, photochemistry, quantum chemistry, solid-state chemistry, theoretical chemistry, and wood chemistry.

15.04 99 Other Chemistry (Specify)

15.05 GEOLOGY

The study of the earth and other celestial bodies, including their composition, structure, history, and related changes.

15.05 01 Geomorphology

The study of the structure, origin, and evolution of landforms.

15.05 02 Hydrology (See 08.07 03 - Hydrology)

The study of water, including its forms, properties, and distribution.

15.05 03 Mineralogy

The study of minerals including their physical and chemical properties, classification, and identification.

15.05 04 Paleontology

The study of the fossil evidences of prehistoric life.

15.05 05 Petrology

The study of the genesis, occurrence, and classification of rocks, including chemical and crystallographic analysis.

15.05 06 Seismology

The study of earthquakes and artificially produced vibrations in the earth.

15.05 99 Other Geology (Specify)

15.06 OCEANOLOGY

The study of oceans and other large bodies of water, including the measurement and interpretation of their physical and biological dynamics.

15.07 PHYSICS

The study of the physical properties and interactions of matter and energy, including equilibrium, power, wave phenomena, mechanics, heat, electricity, magnetism, sound, light, special relativity, and the particular nature of matter.

15.07 01 Acoustics

The study of the nature and characteristics of audible sound.

15.07 02 Astrophysics

The study of the physical and chemical composition of celestial bodies, and of the interactions between matter and radiation within celestial bodies and in interstellar space.

15.07 03 Biophysics (See 08.05 05 – Biophysics)

The study of biological phenomena using physical principles and methods.

15.07 04 Electricity

The study of energy generated by friction, induction, or chemical change, and having magnetic, chemical, and radiant effects.

15.07 05 Geophysics

The study of the effects of physical phenomena on the earth.

05.07 06 Optics

The study of the nature and propagation of light.

15.07 07 Particle Physics

The study of the fundamental particles of matter that are smaller than an atom, including protons, neutrons, electrons, and alpha and beta particles.

15.07 08 Quantum Physics

The study of the physical phenomena of radiation that is explained by discrete and discontinuous units of energy.

15.07 09 Solid State Physics

The study of electrical, magnetic, thermal, and optical properties and processes within solids, including theories of conduction of metals, semiconductors, and crystals.

15.07 10 Physical Thermodynamics

The study of heat and mechanical energy changes in physical systems.

15.07 99 Other Physics (Specify)

15.08 GENERAL PHYSICAL SCIENCES

The study of the major topics, concepts, processes, and interrelationships of nonliving matter and associated phenomena.

15.08 01 Cryogenics

The study of the nature and characteristics of very low temperatures and their effects on matter.

15.08 02 Metallurgy

The study of the chemical and physical properties of metals.

15.08 03 Mechanics

The study of motion and the action of forces on bodies, including kinetics, statics, and kinematics.

15.08 04 Nuclear Science

The study of atomic nuclei, including their structure, properties, transformative energies, and radiation, and the interaction of radiation with matter.

15.08 99 Other General Physical Sciences (Specify)

15.09 GENERAL EARTH-SPACE SCIENCE

The study of earth-space science in its entirety with no major emphasis on any specific subcategories within the subject-matter area.

15.99 OTHER LIFE SCIENCES AND PHYSICAL SCIENCES

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN LIFE SCIENCES AND PHYSICAL SCIENCES, SEE APPENDIX E.

16 MATHEMATICAL SCIENCES

Subject matter concerned with the sciences of logical symbolic language and their applications.

16.01 MATHEMATICAL SCIENCES, GENERAL PERSPECTIVES

The study of the history and role of mathematics in human culture and its relationship to other fields of knowledge, including the investigation of the philosophical foundation, content, and educational aspects of mathematics.

16.01 01 Philosophy of Mathematics

The study of the theories, methodology, and assumptions which underlie the mathematical sciences, mathematical activities, and thought, and the study of the underlying relationships between the mathematical sciences and other fields of knowledge, activity, and thought.

16.01 02 History of Mathematics

The study of the development of mathematical sciences and mathematical activities from historical or cultural perspectives; the examination of the interrelationship between the mathematical sciences and areas such as the physical sciences, the arts, government, and technological development; and the geographical examination of mathematicians, statisticians, and other individuals involved in or directly influencing the development of the mathematical sciences and mathematical activities.

16.01 03 Content of Mathematics

The study of the subject matter areas of the mathematical sciences, their description, content, and development, and the interrelationships among the various subject areas, including examination of the subject areas of the mathematical sciences with regard to heuristic considerations.

16.01 99 Other Mathematical Sciences, General Perspectives (Specify)

16.02 LOGIC, SETS, AND FOUNDATIONS

The study of the development of mathematical languages, reasoning, and concepts from apriori perceptions of logic, sets of objects and counting, and the investigation of the general properties of theoretical structures and proofs.

16.02 01 Intuitive Logic and Sets

The study of logical operations in sets, such as counting, partitioning, classifying, union, intersection, and complement.

16.02 02 Mathematical Logic

The study of mathematical theories from the viewpoint of model theory, recursive function theory, proof theory, and set theory.

16.02 03 Finite Sets

The study of sets whose elements can be indexed by integers 1, 2, 3. . .n, inclusive.

16.02 04 Graph Theory

The study of the combinatorial structure of figures consisting of vertices connected by line segments.

16.02 05 Combinatorics

The study of the identification and classification of structures that can be formed from simpler elements by prescribed rules of combination.

16.02 06 Infinite Sets

The study of sets that are not finite, including induction, axiom of choice, category, and topological set theory.

16.02 99 Other Logic, Sets, and Foundations (Specify)

16.03 ARITHMETIC AND ALGEBRA

The study of numbers and operations upon numbers, including the symbolic and structural abstractions of the number concept.

16.03 01 Arithmetic

The study of whole numbers and fractions, as well as the algorithms for performing addition, subtraction, multiplication, and division with these numbers.

16.03 02 Algebra

The study of the use of variables to represent numbers or other concepts, the rules for manipulating such symbolic representations, and the solution of linear and quadratic equations.

16.03 03 Number Theory

The study of the properties of the positive integers, including topics such as primes, divisibility, congruence, and integer solutions of certain equations or systems of equations.

16.03 04 Algebraic Geometry

The study of algebraic equations or systems of equations which define geometric configurations in the plane or space, extending to equations whose coefficients are not only real or complex numbers, but also elements of more general fields or rings and for which the geometric configurations exist in higher-dimensional spaces.

16.03 05 Algebraic Structures

The study of the generalizations of the basic structures of elementary mathematics as found in the system of integers, and the system of rational numbers, up through the system of vectors, stressing the features common to all of these systems, including the concepts of groups, rings, and fields.

16.03 06 Linear and Multilinear Algebra

The study of finite dimensional vector spaces and linear transformations or mappings of a vector space into itself, extending to spaces of infinite dimensions or systems in which several linear relationships exist between sets of variables or vectors.

16.03 07 Universal Algebra

The study of the abstract extensions that can be developed from the properties of algebraic structures, leading to a language for discussing all algebraic systems of a given type.

16.03 08 Group Theory

The study of the properties of structures in algebra which consist of a set of elements and one operation upon this set, extending to the study of the structure of all finite groups and infinite groups and to the use of group theory in other areas of mathematics and science.

16.03 99 Other Arithmetic and Algebra (Specify)

16.04 CLASSICAL ANALYSIS

The study of functions of real or complex variables, limiting processes involving such functions, solution of equations involving these processes, and representation and classification of functions in terms of similar concepts or functions.

16.04 01 Calculus

The study of limiting processes for functions of real or complex variables, especially differentiation and integration.

16.04 02 Real Analysis

The study of discipline associated with analytic properties such as continuity, differentiability, and integrability of functions of real variables.

16.04 03 Measure and Integration

The study of spaces in which a measure has been defined, real and complex valued functions on such spaces and integrals of such functions, families of functions, and integrals defined without regard to a measure.

16.04 04 Complex Analysis

The study of the discipline associated with analytic properties such as continuity and differentiability of functions of complex variables. It also includes the representation of complicated functions in terms of simpler ones, classes of complex-valued functions, and the study of the real or imaginary part of a differentiable function, known as potential theory.

16.04 05 Special Functions

The study of particular classes of functions, including Bessel functions, which arise in certain problems in differential equations or mathematical physics; series representations of other functions in terms of special functions; and integral representations in terms of special functions.

16.04 06 Ordinary Differential Equations

The study of the solution of equations or systems of equations containing one or more unknown functions of a single real variable, along with derivatives of these functions, and quantitative and qualitative properties of solutions or classes of solutions.

16.04 07 Partial Differential Equations

The study of the solution of equations containing functions of several real variables along with partial derivatives of these

functions, usually over a restricted domain of the independent variables and subject to conditions on the function and its derivatives on some or all of the boundary of this domain; quantitative and qualitative properties of solutions or classes of solutions; and methods of solutions applicable to certain classes of equations.

16.04 08 Finite Differences and Functional Equations

The study of the solution of equations involving unknown functions, other than differential or integral equations, and in particular, equations which relate the values of the unknown function at two or more algebraically related variables.

16.04 09 Ergodic Theory

The study of transformations and their iterates, or families of transformations, which are defined on a measure space and preserve the measure. Particular attention is given to asymptotic properties and to classification and representation of such transformations.

16.04 10 Fourier Series and Integrals

The study of infinite series of trigonometric functions and integral transforms with a trigonometric kernel, convergence and summability of such series and integrals, and representation of continuous or integrable functions in terms of such series and integrals.

16.04 11 Integral Equations and Transforms

The study of integral equations which involve an unknown function appearing in an integrand. Integral transforms are defined as integrals of products of the transformed function and a fixed function.

16.04 12 Calculus of Variations

The study of problems where an unknown function is sought that will maximize or minimize, within a given class, an integral or more general function which involves the unknown function.

16.04 99 Other Classical Analysis (Specify)

16.05 FUNCTIONAL ANALYSIS

The study of algebraic and topological structures in infinite dimensional spaces and mappings between such spaces.

16.05 01 Hilbert Spaces and Operators

The study of linear spaces in which an inner product has been defined, and of linear operators from one such space to another or to the real or complex numbers, including classification and representation of such spaces and functions.

16.05 02 Topological Vector Spaces

The study of linear spaces in which a topology is defined for which the linear operations are continuous, including functions or operators from one such space to another; classification and representation of such spaces and functions; and particular categories of such spaces with their special properties.

16.05 03 Abstract Harmonic Analysis

The study of generalizations of the classical theory of Fourier series or integrals, usually involving topological groups, topological algebras, or Hilbert space.

16.05 04 Topological Groups

The study of infinite groups in which a topology is defined for which the group operations are continuous, as well as special topological groups or categories of such groups. The study of continuous homomorphisms of such a group to finite dimensional Euclidean spaces, and their use in analyzing other functions on the group, is included.

16.05 05 Topological Algebras

The study of linear algebras in which a topology is defined for which the algebraic operations are continuous, including special categories of such algebras.

16.05 06 Convexity

The study of the special properties of functions and families of functions defined in a subset of an infinite dimensional space which derives from the fact that the subset is convex, or that the functions preserve convex combinations.

16.05 07 Distributions (Generalized Functions)

The study of certain linear spaces of real or complex valued functions in a topological vector space, where the functions are designed to extend properties of ordinary functions of a real or complex variable, including the use of such generalized functions in solving classical problems in analysis.

16.05 99 Other Functional Analysis (Specify)

16.06 GEOMETRY AND TOPOLOGY

The study of spatial concepts and relations, either of the real world or an abstract conceptual universe, the classification of shapes and forms, and the imposition of numerical or descriptive structures on such forms.

16.06 01 Plane and Solid Geometry

The study of properties of figures of the plane and three-space that are invariant under translation and rotation.

16.06 02 Trigonometry

The study of the properties of triangles, the relations between sides and angles of triangles, and the applications of triangles.

16.06 03 Analytic Geometry

The study of the application of algebraic procedures to geometry wherein position is represented analytically by coordinates.

16.06 04 Geometries

The study of the special geometrics that are induced by groups of allowable spatial figures, including their common properties and the comparisons between them.

16.06 05 Convex Bodies

The study of geometric objects with the property that, given a line segment with both endpoints lying in the body, the entire line segment lies within the body.

16.06 06 Differential Geometry

The study of curves and surfaces using the methods of differential calculus.

16.06 07 Manifolds and Cell Complexes

The study of locally Euclidean space by reticulation.

16.06 08 General Topology

The study of infinite sets of points or functions, admitting all possible choices of neighborhoods in them, including the topics of compactness, connectedness, and convergence.

16.06 09 Algebraic Topology

The study of topological properties of figures using the methods of abstract algebra.

16.06 10 Global Analysis

The study of those properties of geometric figures, functions, and function spaces that are determined by the whole configuration in contrast to those properties that are determined by the local neighborhoods.

16.06 11 Topological Dynamics

The study of the general theory of transformation groups, algebraic theory of minimal sets, structure theorems, flows induced by vector fields, and symbolic flows.

16.06 99 Other Geometry and Topology (Specify)

16.07 PROBABILITY

The study of the mathematical discipline dealing with the description and interpretation of chance phenomena.

16.07 01 Finite Probability

The study of probabilistic models involving a finite number of outcomes.

16.07 02 Theory of Probability

The study of mathematical models for the description of chance phenomena.

16.07 03 Limit Theorems

The study of theorems dealing with the limiting distribution of random variables depending on a parameter n as n increases indefinitely.

16.07 04 Markov Processes

The study of the stochastic process where the probability distribution for the state at any future instant depends only on the present state.

16.07 05 Stochastic Processes

The study of a family (X_t) of variates with t assuming values in a given range; frequently X_t represent an observation at time t.

16.07 06 Foundations of Probability

The study of interpretations of probability and possible axiomatisations of the theory of probability.

16.07 07 Monte Carlo Methods

The study of the solution of a mathematical problem based on constructing a possibly artificial probabilistic model of the mathematical process and then performing sampling experiments to obtain an approximate solution.

16.07 99 Other Probability (Specify)

16.08 STATISTICS

The study of the science of collecting, describing, and interpreting numerical data.

16.08 01 Descriptive Statistics

The study of methods for the tabular and graphic representation of numerical and categorical data and the computation of summary values.

16.08 02 Applied Statistics

The study of statistical methods used in the solution of real world statistical problems.

16.08 03 Mathematical Statistics

The study of the mathematical bases of statistical theories and methods.

16.08 04 Parametric Inference

The study of the process of generalizing from a sample to the population from which the sample has been drawn. In parametric inference, the population distribution is assumed

known except for the value of one or several unknown parameters. The problem then is to estimate the unknown parameters or test hypotheses about the unknown parameter values on the basis of sample information.

16.08 05 Nonparametric Inference

The study of the process of drawing inferences when little or nothing is known about the population distribution. Since nonparametric inference methods do not depend on the population distribution type, they are often referred to as distribution-free methods.

16.08 06 Linear Models

The study of models in which the equations connecting variates are in linear form. Regression and analysis of variance models are special cases of linear models.

16.08 07 Multivariate Analysis

The study of the analysis of data which are in multivariate form.

16.08 08 Experimental Design

The study of how to design the collection of sample observations required to solve a given inference problem.

16.08 09 Sample Surveys

The study of the methodology, statistical consequences, and practice of selecting observations or sampling units from a population for purposes of inference.

16.08 10 Decision Theory

The study of the mathematical analysis of decisionmaking under uncertainty.

16.08 11 Time Series Analysis

The study of analysis of data relating to a stochastic process in which the parameter is time.

16.08 12 Reliability and Quality Control

The study of the failure rate of individual components and systems of components, and the study of statistical procedures for controlling and improving the quality of manufactured products.

16.08 99 Other Statistics (Specify)

16.09 NUMERICAL ANALYSIS AND APPROXIMATION THEORY

The study of algorithms for computation and approximation, including analysis of their accuracy.

16.09 01 Numerical Analysis

The study of methods for finding numerical approximations to the solutions of mathematical problems, including analysis of the errors arising in the implementation of these methods.

16.09 01 01 Matrix Numerical Analysis

The study of numerical analysis of finite sets of linear equations, of eigenvalue problems, and of other problems involving matrices.

16.09 01 02 Numerical Integration

The study of numerical quadrature and numerical solution of differential equations.

16.09 01 03 Error Analysis

The study of methods for estimating the difference between the numerical solution and the theoretical solution of a problem.

16.09 02 Approximation Theory

The study of methods for approximating an unknown mathematical object by members of a given set of similar objects subject to a given criterion of good approximation, such as approximating a function by simpler functions or a problem solution by solutions of simpler problems.

16.09 02 01 Interpolation

The study of approximation theory in which the objects are functions that agree in value on a predetermined set of points in their common domain.

16.09 99 Other Numerical Analysis and Approximation Theory (Specify)

16.10 CLASSICAL APPLIED MATHEMATICS (PHYSICAL SYSTEMS)

The study of the physical universe by means of analytical models.

16.10 01 Mechanics of Particles and Systems

The study of motion and energy in collections of point masses that can be treated as concentrated at a point.

16.10 01 01 Statics in Rigid Bodies

The study of forces, moments, and equilibrium in bodies whose point masses are fixed relative to one another.

16.10 01 02 Kinematics of Particles and Rigid Bodies

The study of states of pure motion of a system without regard to forces, inertia, or other physical causes of the motion.

16.10 02 Mechanics of Solids

The study of substances that have definite volume and shape and which resist forces that tend to alter their volume or shape.

16.10 03 Fluid Mechanics

The study of statics and dynamics of fluids and the propagation of energy in them.

16.10 04 Optics and Electromagnetic Theory

The study of the propagation of light and other electromagnetic radiation as a branch of mechanics.

16.10 05 Relativity

The study of the form of mechanics in which all effects of one mass on another are projected with the finite speed of light, including special relativity in which space-time is flat, and general relativity which admits curved space-time.

16.10 06 Quantum Mechanics

The study of mechanics deaing with the transfer of energy between the electromagnetic field and point masses, or charges, under Planck's law of the quantum of action.

16.10 07 Statistical Mechanics

The study of the mechanics of aggregates of particles described by statistical measures rather than by the individual coordinates of each particle.

16.10 08 Classical Thermodynamics

The study of the mechanics of interaction between heat energy and the kinetic energy of particles under the laws of classical physics rather than the quantum law.

16.10 09 Mathematical Astronomy, Astrophysics, and Cosmology

The study of mathematical principles fundamental to understanding solar systems, stars, galaxies, and the universe as a whole.

16.10 10 Mathematical Geophysics and Meteorology

The study of mathematical principles fundamental to understanding the physical phenomena of the earth and atmosphere.

16.10 99 Other Classical Applied Mathematics (Specify)

16.11 APPLICATIONS OF MATHEMATICS (GENERAL)

The study of real world systems by deterministic and probabilistic models.

16.11 01 Mathematics of Business and Finance

The study of the application of mathematics and statistics to problems in business and finance.

16.11 02 Actuarial Mathematics

The study of mathematical and statistical methodology dealing with problems of risks in insurance.

16.11 03 Mathematics of Economics

The study of mathematical and statistical models and methodology in economics.

16.11 04 Game Theory

The study of formulation and solution of mathematical and statistical decision problems as games.

16.11 05 Mathematical Programing (Linear and Nonlinear)

The study of the formulation and solution of problems in optimizing an objective, or criterion function subject to a set of constraints.

16.11 06 Control Theory and Optimal Control

The study of the formulation and optimization of systems governed by differential equations under a functional mapping called the control.

16.11 07 Mathematical and Statistical Biology

The study and application of mathematical and statistical models and methodology in biology.

16.11 08 Mathematical and Statistical Psychology

The study and application of mathematical and statistical models and methodology in psychology.

16.11 09 Mathematical and Statistical Sociology

The study and application of mathematical and statistical models and methodology in sociology.

16.11 10 Communication Theory

The study of the logic and modeling of mathematical systems which create, transmit, and evaluate messages.

16.11 10 01 Mathematical Information Theory

The study of the number of possible choices of messages, expressible as a value of some monotonic function of the number of choices.

16.11 10 02 Cybernetics

The study of human control functions and of mechanical and electrical systems designed to replace them, involving the application of statistical mechanics to communication engineering.

16.11 11 Multivariate Data Analysis

The study and use of mathematical, statistical, and graphic methods for revealing the form and pattern of multivariate interrelationships among both the variables and the samples, including cluster analysis and numerical taxonomy.

16.11 99 Other Applications of Mathematics (General) (Specify)

16.12 USER ORIENTED MATHEMATICS

The study of the applications of basic mathematical concepts and procedures to situations encountered by persons in everyday life or in vocational settings.

16.12 01 Business Mathematics

The study of those aspects of mathematics which apply particularly to business problems.

16.12 02 Consumer Mathematics

The study of the various applications of mathematics, such as informal algebra and geometry which apply particularly to consumer problems, including ratios, proportions, and percentages.

16.12 99 Other User Oriented Mathematics (Specify)

16.99 OTHER MATHEMATICAL SCIENCES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN MATHEMATICAL SCIENCES, SEE APPENDIX E.

17 MILITARY SCIENCES

Subject matter concerned with the causative factors and tactical principles of warfare, armed conflict, and defense.

17.01 MILITARY HISTORY

The study of the historical basis and fundamentals of the principles of war, of combat and the conduct of war, of national security, and of the use of force.

17.01 01 History of Warfare

The study of the historical development of military thought and actions as practiced by world leaders and military organizations.

17.01 02 American Military History

The study of the development of military services, national defense, and military engagements of the United States from the American Revolution to the present.

17.01 03 Aerospace History

The study of the evolution and development of air power from balloons and dirigibles through jet aircraft and rockets.

17.01 04 Army History

The study of the evolution and development of military land forces, including men, materiel, and systems used in armed conflicts, national defense, or world peace.

17.01 05 Naval History

The study of the evolution and development of naval forces, including men, materiel, and systems used in armed conflicts, national defense, or world peace.

17.01 99 Other Military History (Specify)

17.02 MILITARY ORGANIZATION

The study of the structure and principles of the chain of command and control in the branches and units of the military services.

17.02 01 Organization of the Air Force

The study of the structure and principles of the chain of command and control in the Air Force.

17.02 02 Organization of the Army

The study of the structure and principles of the chain of command and control in the Army.

17.02 03 Organization of the Marine Corps

The study of the structure and principles of the chain of command and control in the Marine Corps.

17.02 04 Organization of the Navy

The study of the structure and principles of the chain of command and control in the Navy.

17.02 99 Other Military Organization (Specify)

17.03 MILITARY MANAGEMENT AND LEADERSHIP

The study of management and leadership theory, methods, and principles as applied to the military, including assumption of command, senior-subordinate relationships, chain of command, span of control, and supervisory and motivational techniques.

17.04 NATIONAL SECURITY AND DEFENSE

The study of the formulation and implementation of American security policy, the development of American military institutions, and the operation of the national security system in the United States.

17.05 MILITARY LAW

The study of the provisions and application of the Uniform Code of Military Justice and regulations of the Department of Defense and the service branches, including criminal actions, administrative laws, the international laws of war, procurement and contracting, and courts-martial procedures.

17.06 INTERNATIONAL MILITARY SYSTEMS

The study of the structure and dynamics of the relationship and balance of power between nations, international politics, and the military systems maintained by the nations of the world.

17.07 MILITARY COMMUNICATIONS

The study of command, control, and communications systems used in the tactical or strategic employment of military personnel.

17.08 FIELD TRAINING, CAMPS, AND CRUISES

The study of the application of the topics of military science to realistic environments as sponsored and provided by the armed services.

17.09 DRILL, COMMANDS, AND CEREMONIES

The study of and practical training in the nomenclature, positions, movements, courtesies and honors, and other aspects of unit leadership in formal marching or other precise military maneuvers.

17.10 WEAPONRY AND MARKSMANSHIP

The study of the characteristics, maintenance, and functioning of weapons for use in attack or defense, and of the techniques of sighting and shooting weapons.

17.11 MILITARY FIRST AID AND HEALTH EDUCATION

The study of techniques of personal hygiene and health control; dressing and protection of wounds; and first aid, lifesaving, and rescue measures that are encountered in the military environment.

17.12 AIR FORCE

The study of the role of the Air Force in the contemporary world, including the total force structure, strategic offensive and defensive forces, general purpose forces, and aerospace support force.

17.12 01 Military Aeronautics

The study of the basic elements of flight [illegible] utilization of aircraft for military purposes and [illegible].

17.12 02 Military Aerospace

The study of the design, construction, [illegible] maintenance of aircraft and space vehicles as utilized by the Air Force for military purposes and national defense.

17.12 03 Military Astronautics

The study of space programs and technology as utilized by the Air Force for military purposes and national defense.

17.12 99 Other Air Force (Specify)

17.13 ARMY

The study of the purpose and objectives of the United States Army and all its branches, its rank structure, its customs and traditions, and its importance in national defense and security.

17.13.01 Military Tactics

The study of the principles and techniques of maneuvering small to large groups of combat forces into a plan of action for gaining an advantage or success.

17.13 02 Land Navigation and Map Reading

The study of military maps, photographs, and terrain for solving tactical and administrative problems by plotting, ascertaining, and directing the movement of ground forces.

17.13 99 Other Army (Specify)

17.14 MARINE CORPS

The study of the purpose and objectives of the United States Marine Corps and all its branches, its rank structure, its customs and traditions, and its importance in national defense and security.

17.15 NAVY

The study of the purpose and objectives of the United States Navy and all its branches, its rank structure, its customs and traditions, and the importance of seapower and naval service in national defense and security.

17.15 01 Maritime Heritage and Affairs

The study of the role of seapower and seamen, including the merchant marines, in the growth and development of the United States and the impact of such development on national maritime policy.

17.15 02 Navigation and Naval Operations

The study of the theory, principles, and procedures of ship navigation, movements and deployment.

17.15 03 Seamanship

The study of the fundamentals of the art of handling, working, and navigating naval ships and small craft.

17.15 04 Naval Ship Systems

The study of the types, structure, and purpose of naval ships, including shop construction and compartment designation, propulsion systems, communication and control systems, and naval ordnance systems.

17.15 99 Other Navy (Specify)

17.99 OTHER MILITARY SCIENCES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN MILITARY SCIENCES, SEE APPENDIX E.

18 PHILOSOPHY, RELIGION, AND THEOLOGY

Subject matter concerning Philosophy—the critical examination of the subject matter categories for describing reality, the nature and contexts of human experience, the methodology of rational inquiry and criteria of practice; Religion—the investigation of organized forms, beliefs, and practices related to eternal principles or transcendent spiritual entities; and Theology—the study of God, sources of revelation, historical investigations, and the response of the Jewish and Christian communities.

18.01 AESTHETICS

The study of the nature and value of art, appreciation, and standards of critical evaluation.

18.01 01 Philosophy of Art

The study of the nature and value of the traditional fine arts and architecture in the life of the individual and of society.

18.01 02 Philosophy of Creativity

The study of the nature and value of the creative process and of such notions as genius and originality.

18.01 03 Philosophy of Criticism

The study of the nature and limits of rationality with emphasis on queries regarding the objectivity of critical discourse.

18.01 04 Philosophy in Literature

The study of philosophical themes embodied in fiction, drama, and poetry, as well as of exegetical problems posed by metaphor and other figurative uses of language.

18.01 99 Other Aesthetics (Specify)

18.02 EPISTEMOLOGY

The study of philosophical theories about the bases, extent, and limitations of human knowledge.

18.02 01 Philosophy of Psychology

The study of the more speculative and controversial issues relating to mind and consciousness arising out of empirical psychology which have implications for the philosophical understanding of the nature of knowledge.

18.02 02 Philosophy of Natural Science

The study of the nature of such sciences as physics and astronomy, especially of the methodology of scientific inquiry, its presuppositions, concepts, and its place in the general scheme of intellectual pursuits.

18.02 03 Philosophy of Social Science

The study of the philosophical problems arising out of intellectual investigations into the functioning of human societies and into the relations of individuals within it, including problems regarding the research methodologies used by investigators in the social sciences.

18.02 99 Other Epistemology (Specify)

18.03 ETHICS

The critical study of theories of morality, of standards of conduct, and of the logic of moral or ethical judgment.

18.03 01 Personal Moralities

The study of that part of ethics dealing with the codes and conduct of individuals, the assessment of individual aspirations, and of the motivations determining individual action.

18.03 02 Social Ethics

The study of that part of ethics dealing with the codes, conduct and customs of social groups, the influence of group norms on individual behavior, and the rational reconcilability of conflicting norms.

18.03 03 Ethics of Professions

The study of the ethical or moral dilemmas of particular relevance to the practitioners of designated occupations or professions, and the criteria for assessing resolutions of these dilemmas.

18.03 04 Metaethical Theories

The study of theories regarding the relationships between ethics and metaphysics, the derivability of ethical principles from metaphysical ones, and the meaning of ethical terms and the logic of ethical discourse.

18.03 99 Other Ethics (Specify)

18.04 HISTORY AND TRADITIONS OF PHILOSOPHY

The study of the sequential development of philosophical ideas including the analysis of particular philosophies and their interrelationships.

18.04 01 Ancient Western Philosophy

The study of the sequential development of philosophical ideas, viewpoints, and positions from pre-Socratics through Plato, Aristotle, and their immediate successors.

18.04 02 Medieval Western Philosophy

The study of the sequential development of medieval philosophical ideas including the analysis of particular philosophies and their interrelationships.

18.04 03 Modern Western Philosophy

The study of the sequential development of philosophical ideas and viewpoints from the Renaissance through the 19th century.

18.04 04 Contemporary Western Philosophy

The study of the sequential development of philosophical ideas and viewpoints dating from the beginning of the 20th century.

18.04 05 Oriental Philosophy

The study of the sequential development of oriental philosophical ideas, including the analysis of particular philosophies and their interrelationships.

18.04 06 African Philosophy

The study of the sequential development of philosophical ideas and viewpoints stemming from the African experience in Continental Africa and other parts of the world.

18.04 07 Jewish Philisophy

The study of the sequential development of philosophical ideas and viewpoints dealt with within the cultural framework of the Jewish people.

18.04 99 Other History of Philosophy (Specify)

18.05 LOGIC AND PHILOSOPHICAL METHODOLOGY

The study of the nature of reasoning and the criteria of valid inference, together with a critical examination of the presuppositions of philosophical inquiry.

18.05 01 Informal Logic

The study of familiar modes of argumentation, and of recurring types of fallacies with a view to developing skills of critical thinking and clarity of verbal communication.

18.05 02 Symbolic Logic

The study of patterns of reasoning and rules of inference by means of a formalized logical language or calculus, the contemporary theory of deductive influence, and the propositional and predicate calculus.

18.05 03 Metaphilosophy

The study of the aims and methods of philosophy, and of the relationship between philosophy and other intellectual pursuits.

18.05 04 Philosophy of Language

The study of the origin, nature, and structure of human languages, of the historical development of linguistic systems, and of the criteria for differentiating the language of humans from that of other creatures.

18.05 05 Philosophy of Mathematics

The study of the nature of mathematics based on a logical and philosophical examination of its fundamental concepts and methods.

18.05 06 Theories of Value Criteria

The study of theories dealing with the bases for judging worth or excellence.

18.05 99 Other Logic and Philosophical Methodology (Specify)

18.06 METAPHYSICS

The study of the generic traits and categories ascribable to actual, as well as possible existence.

18.06 01 Cosmology

The study of the origin and structure of the universe.

18.06 02 Ontology

The study of the nature of existence or being as such, as distinct from material or spiritual existence.

18.06 03 Existentialism

The study of that philosophy of human nature and the worth of knowledge which is not grounded in an abstract or absolutist idea of truth, but in an analysis of the pure data of consciousness and the existing individual's situation in the world as espoused by Buker, Jaspers, Marcel, and Sartre.

18.06 04 Phenomenology

The study of philosophical inquiry into the foundations of all the sciences which proceeds from attempts at describing the formal structures of all phenomena or modes of experiencing phenomena as espoused by Brentano, Husserl, Meinong, Heidegger, and Merleau-Ponty.

18.06 05 Philosophical Anthropology

The study concerned with the essence of man.

18.06 06 Philosophy of Action

The study of philosophical problems arising in connection with such concepts as conscious, voluntary, or purposive behavior; weakness of will; and questions about the interrelationship of subject and object.

18.06 07 Philosophy of Life

The study of the question concerning the meaning that can be found in life and in our own individual lives, and the critical examination of assumptions about relation of living to nonliving things.

18.06 08 Philosophy of Mind

The study of such topics as the mind-body problem, personal identity, the unity of consciousness, the unconscious, and the problem of other minds.

18.06 09 Philosophy of Religion

The study of the nature and value of religion from a philosophical point of view.

18.06 99 Other Metaphysics (Specify)

18.07 SOCIAL AND POLITICAL PHILOSOPHY

The study of the conditions and principles of social organization, and the critical evaluation of theories of society.

18.07 01 Philsosophy of Social and Political Theories

The study of philosophical problems arising in connection with theories about the structure of human societies and out of attempts to defend democratic ideals in social and political life, or to substantiate claims advanced in the name of social justice, or to promote racial, sexual, and religious equality.

18.07 02 Philosophy of Education

The study of the nature, value, and methods of educational processes and of the philosophical presuppositions on which they rest.

18.07 03 Philosophy of History

The study of the nature, value, and methods of inquiry into the past, including a critical examination of the philosophical presuppositions of historiographical hypothesis.

18.07 04 Philosophy of Law

The study of the nature, value, and methods of inquiry into law and relations between legality, personal morality, and social ethics.

18.07 05 Philosophy of Medicine

The study of the nature, value, and methods of inquiry into medicine.

18.07 99 Other Social and Political Philosophy (Specify)

18.08 PHILOSOPHICAL FOUNDATIONS

The study of the basic truths and principles of being, and of knowledge, or conduct in such fields as ethics, metaphysics, and logic.

18.09 SPECIFIC RELIGIONS

The study of the origin, histories, organized forms, beliefs, worship, and practices of specific religions.

18.09 01 Buddhism

The study of the religion and philosophical system of central and eastern Asia, founded in India in the sixth century B.C. by Buddha.

18.09 02 Christianity

The study of the religion based on the life and teachings of Jesus Christ.

18.09 02 01 Orthodoxy

The study of the Greek, Russian, and other branches of the Orthodox church.

18.09 02 02 Roman Catholicism

The study of the Roman Catholic church.

18.09 02 03 Protestantism

The study of the various Protestant forms of Christianity.

18.09 03 Hinduism

The study of the religion and social system of Hindus developed around Brahmanism in India.

18.09 04 Islam

The study of the Moslem religion founded by Mohammed in the sixth century.

18.09 05 Judaism

The study of the religion of the Jews based on the Hebrew scriptures and the Talmud.

18.09 06 Tribal Religions

The study of the religions of tribal peoples in various parts of the world.

18.09 99 Other Specific Religions (Specify)

18.10 PHENOMENOLOGY OF RELIGION

The study of human spirituality and outer forms of religion.

18.10 01 Anthropology of Religion

The study of religion through the use of the theories and methods of anthropology.

18.10 02 Comparative Religions

The study of religions through the use of the theories and methods of comparative and historical analysis.

18.10 03 Psychology of Religion

The study of religion through the use of the theories and methods of psychology.

18.10 04 Sociology of Religion

The study of religion through the use of the theories and methods of sociology.

18.10 99 Other Phenomenology of Religion (Specify)

18.11 RELIGION AND HUMAN EXPERIENCE

The study of the relationships of religion and various aspects of human experience.

18.11 01 Religion and Science

The study of the historical and contemporary relationship between religion and science in terms of concepts, conflicts, and cooperation.

18.11 02 Religion and Personality Studies

The study of the relationships between religious and personal experiences, such as in human developmental stages, health, sexuality, consciousness raising, and death and dying.

18.11 03 Religion and Social Issues

The study of the relationships between religion and social institutions, social change, and social problems.

18.11 04 Religion and Culture

The study of the relationships between religion and cultural values and beliefs, arts, liberation, and styles of life.

18.11 99 Other Religion and Human Experience (Specify)

18.12 SACRED WRITINGS

The study of sacred writings and related sources of the Jewish and Christian tradition.

18.12 01 Sacred Writings of the Jewish Faith

The study of sacred writings and related sources of the Jewish tradition.

18.12 02 Sacred Writings of the Christian Faith

The study of sacred writings and related sources of the Christian tradition.

18.12 03 Interpretation of Sacred Writings

The study of the ways in which sacred texts have been interpreted and utilized in the continuing evolution of religious traditions.

18.12 99 Other Sacred Writings (Specify)

18.13 HISTORICAL THEOLOGY

The study of the origin and development of the Jewish and Christian traditions.

18.13 01 Ancient Near East Theology

The study of the origins of and the development of the Jewish traditions from 2000 B.C. to 1 A.D.

18.13 02 Early Christian and Rabbinic Theology

The study of the origins of the Christian tradition from 1 to 300 A.D., and of Jewish traditions during the Rabbinic period of 1 A.D. to 600 A.D.

18.13 03 Medieval Theology

The study of the development of Jewish and Christian tradition during the 5th to the 15th centuries.

18.13 04 Modern Theology

The study of the development of the Jewish and Christian tradition from the 16th century to the present day.

18.13 99 Other Historical Studies (Specify)

18.14 SYSTEMATIC THEOLOGY

The study of the religious beliefs of the Jewish and Christian traditions.

18.14 01 God

The study of the religious beliefs about a Supreme Being.

18.14 02 Theological Anthropology

The study of the relationship of God to individuals and of persons to each other.

18.14 03 Mysticism

The study of the doctrine of spiritual intuition which transcends ordinary understanding and which recognizes an intimate union of the soul with God.

18.14 04 Ecclesiology

The study of the nature of the Church.

18.14 05 Sacramental Theology

The study of the sacraments of the Christian Church.

18.14 06 Christology

The study of the nature, person, and deeds of Jesus Christ and beliefs about Him.

18.14 07 Soteriology

The study of the Doctrine of Salvation and deliverance through Jesus Christ.

18.14 08 Pneumatology

The study of theological doctrines of spiritual beings, of an intermediary spirit between man and God, or of the Holy Spirit.

18.14 09 Eschatology

The study of the theological doctrines concerning death, judgment, and an afterlife.

18.14 99 Other Systematic Theology (Specify)

18.15 MORAL AND ETHICAL STUDIES

The study of the sources and application of principles for individual and group behavior in the Jewish and Christian traditions.

18.15 01 Moral and Ethical Principles

The study of the sources of principles for individual and group behavior.

18.15 02 Moral and Ethical Issues

The study of the application of principles for individual and group behavior in the Jewish and Christian traditions.

18.15 99 Other Moral and Ethical Studies (Specify)

18.16 PASTORAL STUDIES

The study of the relationship of theology to the practice of ministry.

18.16 01 Homiletics

The study and practice of the preparation and delivering of sermons.

18.16 02 Pastoral Care and Counseling

The study and practice of methods, theories, and techniques of providing care and counseling.

18.16 03 Religious Education

The study of the application of methods and techniques of providing the theological bases and the practical implications of the professional activities of religious workers.

18.16 04 Religious Social Action

The study and application of the theories and methods of religious social action.

18.16 05 Worship and Liturgy

The study of the history, theory, and practice of ritual and ceremony in religious services.

18.16 06 Sacred Music

The study of the history, theory, and practice of music for church settings.

18.16 07 Church Administration and Leadership

The study of the theory and practice of planning, managing, and organizing specific areas in the church.

18.16 08 Missiology

The study of the theories and practice of the mission of the Christian Church throughout the world.

18.16 09 Ecclesiastical Law and Polity

The study of the laws and guidelines by which specific groups within the Jewish and Christian traditions operate.

18.16 99 Other Pastoral Studies (Specify)

18.99 OTHER PHILOSOPHY, RELIGION, AND THEOLOGY (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN PHILOSOPHY, RELIGION, AND THEOLOGY, SEE APPENDIX E.

19 PHYSICAL EDUCATION, HEALTH EDUCATION, AND LEISURE

Subject matter concerned with the systematic investigation and application of physical education, kinesiology, sport, dance, health education, driver and safety education, and leisure.

19.01 PHYSICAL EDUCATION

The study of the integrated components of kinesiology, sport, dance, and other physical activities basic to the development and conduct of programs in physical education.

19.01 01 Movement Education

The study of the techniques of developing optimal motor movement and body awareness in individuals through the interrelated use of time, space, force, and effort.

19.01 02 Exercise

The study of principles and techniques that lead to a regular series of specific human movements designed to develop, maintain, or rehabilitate the body.

19.01 02 01 Training and Conditioning

The study of the principles and techniques that lead to a regular series of specific movements designed to bring the body to peak physical performance.

19.01 02 02 Developmental Exercise

The study of the principles and techniques that lead to a regular series of specific movements designed to enhance normal muscular development.

19.01 02 03 Therapeutic Exercise

The study of the principles and techniques that lead to a regular series of specific movements designed to enhance recovery from joint, bone, and muscular disease or injury.

19.01 02 04 Relaxation

The study of the principles and techniques that lead to a regular series of specific movements designed to produce either a mental or physical cathartic effect.

19.01 03 Group Games, Contests, and Self-Testing Activities

The study and practice of the cooperative or competitive, self-evaluative skills of sports and games conducted on an individual or mass basis, including dodge ball, partner tag, tug-o-war, potato race, Indian wrestle, soccer dribble, volley ball service, basketball goals per minute, and softball throw for accuracy and for distance.

19.01 04 History of Physical Education

The study of the challenges, continuities, and changes that underlie significant events in the development of physical education, and the factors which have influenced that development.

19.01 05 Philosophy of Physical Education

The study of the fundamental nature and significance of physical education.

19.01 06 Physical Education Administration

The study of the theories and procedures of planning, organizing, staffing, financing, directing, coordinating, evaluating, and reporting the physical education orogram.

19.01 07 Physical Education Curriculum

The study of the theories and techniques of selecting and ordering content, designing structure, and evaluating intended outcomes in physical education programs.

19.01 08 Physical Education Instruction

The study of the principles and techniques of selecting, designing, and presenting instructional materials, and evaluating specific learning objectives in physical education.

19.01 09 Physical Education Supervision

The study of the principles and techniques designed to improve the professional development and performance of the teacher, and the results of the teaching-learning process.

19.01 10 Measurement and Evaluation in Physical Education

The study of the principles and techniques of collecting, analyzing, and interpreting data gained from each phase of the physical education program, including curriculum processes, instructional objectives and procedures, and administrative and supervisory functions.

19.01 99 Other Physical Education (Specify)

19.02 KINESIOLOGY

The study of the biomechanical, anatomical, physiological, and psychomotor principles that are involved in human movement.

19.02 01 Biomechanics (See 08.05 03 – Biomechanics)

The study of the structure and function of biological systems by means of mechanics, photographic observations, and electromyography.

19.02 02 Neuromuscular Anatomy

The study of the interrelated morphological characteristics of the muscular and nervous tissues and systems of the body.

19.02 03 Performance Physiology

The study of the changes in various mechanisms of the body that occur prior to, during, and following exercise, and the identification of the long-term effects of exercise as one engages in systematic physical training.

19.02 03 01 Neuromuscular Physiology

The study of the nervous and muscular processes responsible for the organization and integration of muscular activities into meaningful and efficient movement patterns, and the effects of exercise, health, and aging.

19.02 03 02 Cardiorespiratory Physiology

The study of the cardiovascular and respiratory regulatory mechanisms responsible for the maintenance of chemical and physical equilibrium of human cells prior to, during, and following participation in sports and physical activity with emphasis given to understanding energy liberation and transfer, adaptations to extreme internal and external environmental conditions, and the effects of training, health, and aging.

19.02 04 Psychomotor Behavior

The study of the principles and techniques of how an individual learns to move with control and efficiency through space.

19.02 04 01 Motor Learning

The study of the principles and techniques by which an individual acquires motor skills through practice.

19.02 04 02 Perceptual Motor Development

The study of the principles and techniques by which an individual integrates sensory response mechanisms to achieve movement relative to age, including space and time structure, and visual, auditory, and tactile senses.

19.02 05 Sports Medicine

The study of the scientific principles involved in understanding sport influences in the human organism, along with the specialized medical practices of care and supervision that are applied to the individual before, during, and after participation in sports and physical activity.

19.02 05 01 Athletic Facilities and Equipment

The study of the animate and inanimate environmental factors important to the design, care, and maintenance of facilities and equipment for athletic games and contests to create safe, healthful, fair, and optimum environments for participants and spectators.

19.02 05 02 Athletic Training

The study of the psychophysiological principles for general physical training, specialized technical training, individualization of training, and motivation and psychological preparation designed to bring the athlete to peak condition for competition.

19.02 05 03 Diagnostic Procedures

The study of the principles and procedures of measurement and evaluation that are appropriate for the determination of health status and body development owing to age, sex, and state of general and special training.

19.02 05 04 Erogenics

The study of the nature and effects of special aids to athletes that improve the capacity of the muscles to do work and to remove or reduce inhibitory mechanisms to physiological functions.

19.02 05 05 Exercise Prescriptions

The study of the type, frequency, intensity, and duration of physical training procedures that lead to optimal development of physiological processes and athletic skills, with emphasis given to prevention or rehabilitation from degenerative processes.

19.02 05 06 Injury Prevention and Treatment

The study of the medical and physiotherapeutic bases for the recognition and management of athletic injuries, including diagnostic procedures, first-aid and emergency care, definite medical care, and procedures of rehabilitation.

19.02 99 Other Kinesiology (Specify)

19.03 SPORT

The study of the principles and techniques of developing, organizing, and conducting activities that require vigorous bodily exertion and that are carried on according to some form or set of rules.

19.03 01 Sport in Schools and Colleges

The study of sport that is organized for student participation in educational settings.

19.03 01 01 Athletics

The study of organized sports that are a part of interscholastic and intercollegiate competition.

19.03 01 02 Intramurals

The study of organized sports that are provided for all students within the confines of one institutional program.

19.03 02 Sport in Community Agencies

The study of organized sports in which the individual or group participates outside the organizational structure of the educational institution.

19.03 03 Sport History

The study of significant events in the development of sport and the factors which have influenced that development.

19.03 04 Sport Sociology

The study of human society, organizations, and institutions as they relate to sport.

19.03 05 Sport Philosophy

The study of the fundamental nature and significance of sport.

19.03 06 Sport Psychology

The study of human behavior in sport activities.

19.03 07 International and Comparative Sport

The study and comparative analysis of sport in two or more countries or world regions with special emphasis on the influence of cross-cultural factors and development of systems and controls toward increased international understanding.

19.03 08 Administration of Sport

The study of the theories and procedures of planning, organizing, staffing, financing, directing, coordinating, evaluating, and reporting athletic and sport programs.

19.03 09 Evaluation of Sport

The study of the theories and techniques used in collecting and interpreting data related to sport and sport programs.

19.03 10 Supervision of Sport

The study of the principles, policies, and methods of improving the quality of sport programs.

19.03 11 Instruction and Coaching of Sport

The study of the strategies and designs employed to create the opportunity for students to learn sports, and those theories, strategies, and designs employed to improve the performance of selected players or groups of players.

19.03 12 Sport Activities

The study of the nature and performance of specific physical activities that are organized around rules, fields of play, and individual and group participation.

19.03 12 01 Aquatics

The study of the nature and performance of sport activities that are performed in and around water.

19.03 12 02 Team Sport

The study of the nature and performance of competitive games involving rules and strategy, such as baseball, basketball, field hockey, football, ice hockey, lacrosse, soccer, softball, and volleyball.

19.03 12 03 Self-Defense

The study of the nature and performance of selected physical activities related to defending oneself, such as karate and judo.

19.03 12 04 Individual Sports

The study of the nature and performance of individually performed sport activities such as skiing, archery, and track and field events.

19.03 12 05 Dual Sports

The study of the nature and performance of sport activities which require two competitors such as fencing, tennis, badminton, and quoits.

19.03 12 06 Adventure and Challenge Sports

The study of the nature and performance of activities which focus on challenge and the greater awareness of man and his environment, such as repelling, back-packing, orienteering, and wilderness and survival training.

19.03 12 07 Gymnastics

The study of the nature and performance of floor exercise and activities that require recognized apparatus such as the bars, beam, rings, and horse.

19.03 99 Other Sport (Specify)

19.04 DANCE (See 03.01 – Dance)

The study of the principles and techniques associated with performances involving the rhythmic movement of the feet and body, usually in the accompaniment of music.

19.04 01 Dance Choreography

The study of the principles and techniques of arranging bodily movements to create a dance.

19.04 02 Dance Notation

The study of the techniques of systematic recording, by sign or symbol, the movements of a dancer or group of dancers in a particular dance form.

19.04 03 Dance Production

The study of the performance of dance and the setting in which dance is presented.

19.04 04 Dance Activities and Form

The study of rhythmic movement in time, force, and space.

19.04 05 Dance History

The study of significant events in the development of dance and the factors which have influenced that development.

19.04 06 Dance Philosophy

The study of beliefs, motives, and behavior in dance.

19.04 99 Other Dance (Specify)

19.05 HEALTH EDUCATION

The study of activities and experiences which develop understandings, attitudes, and practices in promoting optimum, physical, mental, and social health to enrich the quality of life for individuals and society.

19.05 01 Drugs and Other Substance

The study of physical, legal, psychological, and social effects upon individuals, families, and society at large as a result of the use and abuse of drugs and other substances.

19.05 02 Community Health

The study of the availability and accessibility of health services and facilities, the function and service of these health agencies, and the prevailing health conditions in the community.

19.05 03 Consumer Health Education

The study of the relationship between the consumer and health agencies, including available services, sources of information, health advertising, quackery, and information leading to the use or rejection of products and services.

19.05 04 Disease Prevention and Control

The study of the nature of disease characteristics, causation, and prevention.

19.05 05 Environmental Health Education

The study of the effect upon man's health and well-being of such environmental factors as water supply, pollution control, food contamination, air pollution, radiation exposure, crowdedness, noise, and mobility.

19.05 06 Family Health Education

The study of family roles and responsibilities, types of families, family relationships and sexual behavior, preparation for marriage, and family and parental responsibilities.

19.05 07 Mental Health Education

The study of human needs, feelings, and emotions and their effect upon behavior.

19.05 08 Nutrition Education

The study of basic dietary requirements, food choices, and eating patterns, and their relationship to total body development and performance.

19.05 09 Personal Health Education

The study of the origin of living things, heredity, and structure and function of body parts, including growth and development, personal health practices, dental health, and grooming.

19.05 10 Physical Fitness

The study of physical activity factors that permit optimum development and maintenance of bodily functions and provide for general resistance against acute physical stresses, degenerative processes, emotional stress, and mental fatigue.

19.05 11 Safety Education

The study of experiences directed toward acquiring knowledge and behavioral patterns conducive to efficient and safe living, including traffic safety, civil defense and disaster preparedness, fire and water safety, home, school, and community safety, firearm safety, and recreational and industrial safety.

19.05 12 Sex Education

The study of the healthy development of human sexuality, sex roles, and sexual behavior.

19.05 13 Administration of Health Education

The study of the theories and procedures of planning, organizing, staffing, financing, coordinating, and evaluating a program in health education.

19.05 14 Health Education Curriculum

The study of the theories and techniques for selecting and ordering of content, design of program, and evaluation of goals in health education.

19.05 15 Health Education Instruction

The study of the theories and techniques for selecting methods and materials, and evaluating specified learning objectives for programs in health education.

19.05 16 Supervision in Health Education

The study of the principles, methods, and techniques of improving the professional development and performance of the teacher, and the results of the teaching-learning process in health education.

19.05 17 Measurement and Evaluation in Health Education

The study of the tests of achievement and attitude, and the critical analysis of data collected from each phase of the health education program, including administrative functions, curriculum, processes, instructional objectives and procedures, and supervisory techniques.

19.05 99 Other Health Education (Specify)

19.06 DRIVER AND SAFETY EDUCATION

The study of the methods and techniques of developing the knowledge, skills, and judgment necessary for the safe operation of a motor vehicle.

19.06 01 Alcohol, Drugs, and Driving

The study of the effects of mind altering substances on the driving task.

19.06 02 Characteristics of Drivers

The study of the emotional, mental, and physical characteristics of the driver and the effects of those characteristics upon driving.

19.06 03 Development of Driving Judgment

The study of the relationship of vision and perception, knowledge, and physical laws, and their application to formulating judgment and decision making in traffic situations.

19.06 04 Behind-the-Wheel Driving Skills

The study of the basic skills involved in starting and stopping, turning, executing special maneuvers, and driving under hazardous conditions that involve expressways, parking, open-highway driving, and emergency situations.

19.06 05 Motor Bikes and Bicycles

The study of the basic safety factors involved in the operation of a bicycle, motorcycle, or motor scooter, including information about vehicle selection, maintenance and care, and safe driving.

19.06 06 Motor Vehicles and Engineering

The study of automotive mechanics, the economics of vehicle ownership, trip planning, and the functions and responsibilities of the automotive engineer, highway engineer, and traffic engineer.

19.06 07 Simulation Driving Experience

The study of basic driving skills through the use of electromechanical devices which simulate the actual driving experience and assist in developing perceptual and judgmental proficiencies.

19.06 08 Student Patrol

The study of the activities and experiences concerned with the organization, supervision, structure, and functions of various school patrols, including traffic, hall or school, school bus, playground, fire drill, and civil defense.

19.06 09 Traffic Accidents

The study of literature and films concerned with the human factors, socioeconomic conditions, and road and vehicle conditions as they relate to traffic accidents.

19.06 10 Traffic Citizenship

The study of the driver's responsibility to other drivers and highway users, to himself, to the community, and to the support of public officials.

19.06 10 01 Passenger Safety

The study of the responsibilities and obligations of the passenger relative to safety when riding in a passenger car or taxi, a school bus, public conveyance, a train, a boat, and an airplane.

19.06 10 02 Pedestrian Safety

The study of safe pedestrian practices in traffic, on rural roads and in cities, proper crossing procedures, and obeying traffic signs and signals, including instruction about situations where there are no sidewalks, wearing proper clothing, proper routes to and from school, and obeying student safety patrols.

19.06 11 Traffic Laws and Ordinances

The study of the Uniform Vehicle Code, Model Traffic Ordinances, and State laws and their application to law enforcement.

19.06 99 Other Driver Education (Specify)

19.07 LEISURE STUDIES

The study of the challenges, opportunities, and problems of leisure and its effect on the lives of individuals and the social fabric of local, national, and world communities, including the preparation for living in a leisure-centered society.

19.07 01 Resource Management in Leisure Studies

The study of the principles, methods, and techniques of utilizing economic, natural, and structural resources in the leisure field, including the effective and efficient development, control, regulation and direction of finances, facilities, and land.

19.07 02 Populations and Leisure Services

The study of methods of identifying and satisfying leisure needs of identifiable special population groups including industrial, corrections, armed forces children, aged, disabled or handicapped, or special geographic area populations.

19.07 03 Leisure and Recreation Planning

The study of the principles, methods, and techniques of assessing, forecasting, developing, and evaluating plans for recreation.

19.07 04 Leadership in Leisure Studies

The study of principles, methods, and techniques of planning, conducting, supervising, and evaluating programs in the leisure field.

19.07 05 Recreation Activities

The study of the principles and techniques of satisfying the leisure needs of people.

19.07 05 01 Arts and Crafts

The study of the development of skills related to tastes, interests, arts, and refinements in recreational pursuits.

19.07 05 02 Dramatics

The study of activities in recreation designed to be imitative or creative in nature, with or without the use of music, and related to the tastes, interests, arts, and refinements of the participants.

19.07 05 03 Social Recreation

The study of the development of skills related to activities among people and groups of people.

19.07 05 04 Recreational Sports and Physical Activities

The study and development of understanding, appreciation, and skills related to the participation and enjoyment in sports and physical activities in one's leisure.

19.07 06 History of Leisure Studies

The study of the challenges, continuities, and changes underlying significant events in the development of leisure, and the factors that have influenced development of the field.

19.07 07 Philosophy of Leisure Studies

The study of the fundamental nature, principles, and significance of leisure and recreation.

19.07 08 Sociology of Leisure Studies

The study of the nature of human society, organizations, and institutions as these relate to leisure.

19.07 09 International and Comparative Leisure Studies

The study and comparative analysis of leisure and recreation in two or more countries or world regions with special emphasis on the influence of cross-cultural factors, and the development of systems and controls for increased international understanding.

19.07 99 Other Leisure Studies (Specify)

19.99 OTHER PHYSICAL EDUCATION, HEALTH EDUCATION, AND LEISURE (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN PHYSICAL EDUCATION, HEALTH EDUCATION, AND LEISURE, SEE APPENDIX E.

20 PSYCHOLOGY

Subject matter concerned with the behavior and experience of the individual organism and which applies its findings in service to the individual, to industry, and to government.

20.01 FOUNDATIONS OF PSYCHOLOGY

The study of the body of knowledge and theory shared by all psychologists, working in any of several specific subject-matter areas.

20.01 01 Ethical Principles of Psychology

The study of general and professional ethical problems encountered in practice by research, clinical, and other psychologists.

20.01 02 Historical Perspectives of Psychology

The study of the progressive development of psychological knowledge and theory from classical times to the present, including the development of scientific psychology through the last century, and of the application of that knowledge to individual and social betterment.

20.01 03 Systems of Psychology

The study of major recent and current general views of psychology and the nature of humans, including such systems as functionalism, structuralism, Gestalt psychology, behaviorism, psychoanalysis, humanistic psychology, phenomenological psychology, radical empiricism, ethnology, systems theory.

20.01 04 Theories in Psychology

The study of the methodology of psychological theorizing, including review of specific theories that have been developed to account for diverse specific behavioral phenomena with possible broader applications.

20.01 99 Other Foundations in Psychology (Specify)

20.02 BIOPSYCHOLOGY

The study of the biological basis of the behavior of the individual, including evolutionary, genetic, biochemical, and physiological considerations.

20.02 01 Behavioral Genetics

The study of the principles of genetics and genetic research applied to the behavior of the individual organism, including the identification and selection of heritable traits.

20.02 02 Comparative Psychology: Evolution of Behavior

The study of the behavior of members of particular species, and the relationship of the behaviors of the species to their evolutionary origins.

20.02 03 Biochemistry of Behavior

The study of the biochemical basis of behavior; and the role of hormones and other chemical substances in behavior, including brain chemistry.

20.02 03 01 Psychopharmacology

The study of changes in behavior that occur as a function of drug-ingestion, and the psychological processes associated with such changes, including altered states of consciousness and addiction.

20.02 04 Physiological Psychology

The study of the physiology of the individual with respect to the functioning of physiological systems in the behavior of the individual organism.

20.02 04 01 Neuropsychology

The study of the nervous system, especially the central nervous system, as it participates in or determines behavior, including relevant studies of neuroanatomy and neurophysiology.

20.02 04 02 Sensory Psychophysiology

The study of physiology of the special sense organs and the associated tracts and centers of the nervous system as they relate to sensory processes and perception.

20.02 04 03 Psychophysiology and Biofeedback

The study of the electrical and mechanical activities of the respiratory and circulatory systems, of skeletal musculature, and of the nervous system as they affect individual behavior, including biofeedback and self-control of cortical and other activities.

20.02 99 Other Biopsychology (Specify)

20.03 ENVIRONMENTAL PSYCHOLOGY

The study of natural and man-made environments as spaces in which the individual behaves; activities and processes that occur in them and that are encouraged or discouraged by them; and the choice, design, and evaluation of environments to increase or decrease the likelihood of particular actions.

20.03 02 Architectural Psychology

The study of behavior as a function of the design and construction of man-made spaces and the behavioral laws that enable the architect to plan for the most effective and acceptable use of structures.

20.03 03 Spatial Behavior

The study of behavior as a function of the location about an individual, of other persons, of objects, and of the topography of the individual's physical environment.

20.03 99 Other Environmental Psychology (Specify)

20.04 EXPERIMENTAL PSYCHOLOGY

The study of the general body of methods, data, and laws that has been derived by scientific research, including theoretical and systematic points of view applicable to the prediction, control, and understanding of the behavior of individual human organisms and other species.

20.04 01 Behavior Analysis

The study of the experimental methodology and its findings derived from reinforcement-oriented analysis of both the environment and of the individual's activities.

20.04 02 Decisionmaking

The study of the processes that determine the behavior of the individual organism when specifically confronted with the need to choose, including conflict and the resolution of conflict.

20.04 03 Human Information Processing

The study and interpretation of human behavior based on the application of methods and theories derived from computer-analogies.

20.04 04 Motivation

The study of the processes that determine what actions will occur at a particular time, and the strength or precision with which those actions will occur.

20.04 05 Psycholinguistics

The study of the psychology of language, including the behavioral processes that enter into the generation of speech and writing, and the understanding of both spoken and written languages.

20.04 06 Psychology of Learning

The study of the acquisition and recall of new behaviors, and of the processes of learning new activities, and of retaining them through time.

20.04 06 01 Learning, Conditioning

The study of the modification of a response, following upon and resulting from experience or repeated stimulus.

20.04 06 02 Retention and Recall

The study of the ability to recall material previously learned.

20.04 06 03 Programed Learning, PSI

The study of the methods of presenting materials to be learned in carefully planned sequences, often with the aid of a teaching machine.

20.04 07 Psychology of Sensory Processes and Perception

The study of the sensory systems of vision, hearing, touch, taste, and smell, and their characteristics; the discrimination of objects and events; and the behavioral organization of the physical environment and its measurement.

20.04 08 Psychology of Thinking and Problem Solving

The study of ongoing behaviors of individual organisms that seem independent of the immediate environment and the utilization of behaviors acquired in other contexts to immediate problems.

20.04 99 Other Experimental Psychology (Specify)

20.05 PSYCHOLOGY OF THE INDIVIDUAL

The study of variables that distinguish each individual from others; their origin and assessment; and deviant behaviors and the methodology for amelioration.

20.05 01 Abnormal Psychology

The study of the description, classification, and theory of unusual behaviors that are considered abnormal.

20.05 02 Career Development

The study of occupations, the means for preparing for them, and the techniques for getting hired.

20.05 03 Clinical Psychology

The study of the development of programs for training clinical psychologists, and basic considerations, theory, and practice entering into the methods and theories selected from psychology and other fields as they relate to dealing with the troubled individual. The study includes all methods of assessment and of behavior change, as well as of family or community intervention.

20.05 03 01 Behavior Modification

The study of the theory and methods of modifying undesired behaviors that are derived from the facts of both classical and operant conditioning, including desensitization, implosion, contingency management, and token economies.

20.05 03 02 Crisis Intervention

The study of the application of psychological theories and methods in treating individuals during periods of extreme emotional distress.

20.05 03 03 Assessment

The study of the theories and methods of evaluating an individual's behavior, including interviewing procedures, administration and interpretation of standardized tests, and field work methodology.

20.05 03 04 Psychotherapeutic Method

The study of the consideration of the methods differentially applicable to children and adults that can be pursued to resolve a problem, modify or minimize, or eliminate an undesired or intolerable behavior.

20.05 04 Developmental Psychology

The study of progressive changes in the behavioral processes of individuals as a function of aging through the life span, from conception to death.

20.05 04 01 Psychology of Age Groupings (Child, Adult, Aged)

The study of infant psychology, child psychology, adolescent behavior, psychology of mature or adult individuals, and of the elderly, with consideration and study given to age-associated psychological status and problems of individuals falling into particular age classifications.

20.05 05 Psychology of Adjustment

The study of the body of psychological knowledge that may enable the individual to better adapt to demands placed by other family members, by associates, and by society, as well as by oneself.

20.05 06 Psychology of Death

The study of the behaviors of the terminally ill, of their families, and their associates, including suicide and grief.

20.05 07 Psychology of Disadvantaged Persons (Culturally, or Physically Handicapped)

The study of facts and therapeutic methods related to individuals who fall into identifiable sets, such as exceptional children, children with reading disabilities, the deaf, the physically-handicapped, and the poor.

20.05 07 01 Exceptional Development

The study of the personality development and behavior patterns of individuals with emotional, mental, and physical disabilities.

20.05 08 Psychology of Identifiable Sets (Women, Blacks, Others)

The study of facts and therapeutic methods related to individuals who are women, blacks, members of ethnic groups, and of sets asserting identifiable "life-styles".

20.05 09 Psychology of Personality

The study of the unique organization of the fairly permanent characteristics that set the individual apart from other individuals and, at the same time, determine how others respond to that person.

20.05 99 Other Psychology of the Individual (Specify)

20.06 PSYCHOMETRICS

The study of the mathematical and statistical procedures used in psychological test construction and validation, and of the general problems of the measurement of behavior.

20.06 01 Differential Psychology

The study of the use of test scores of an individual defined as a member of some specific reference group, and of psychological characteristics of occupational and other sets of people.

20.06 02 Psychological Assessment

The study of the theory and practice of selecting and using batteries of psychological tests of an individual for the purpose of classifying, diagnosing, or predicting later behavior.

20.06 03 Psychological Testing

The study of psychological tests, their administration and results, including intelligence tests and various tests of personality.

20.06 04 Survey Techniques

The study of the theory and procedures for constructing or selecting appropriate survey instruments for retrieving psychological data on individuals or groups.

20.06 99 Other Psychometrics (Specify)

20.07 SOCIAL PSYCHOLOGY

The study of the behavior of the individual as a member of a group, and of the processes of associating individuals together.

20.07 01 Attitudes

The study of the complex concept referring to the individual's reactions toward some social object, event, or state of affairs.

20.07 02 Group Processes

The study of the classification of groups on the basis of the behaviors of their members, including the behavior of individuals within such groups as it determines and is determined by, the behaviors of other members of a group.

20.07 03 Organizational Psychology

The study of the behaviors of the individual as they determine the design and effectiveness of social, governmental, or military organizations, and are determined by them.

20.07 99 Other Social Psychology (Specify)

20.08 PSYCHOLOGICAL PROGRAMS (APPLIED AND PROFESSIONAL)

The study of the principles and practices that are utilized in the creation and provision of psychological programs that are established in a variety of settings.

20.08 01 Community Psychology

The study of programs for the training of community psychologists, including the theory and practice of using psychologists, psychological fact, practice, and theory in psychological work not in the academic, school, and clinical contexts, but rather in the broader social community, working with private and public organizations.

20.08 02 Counseling Psychology

The study of the development of programs for training counseling psychologists, including the theory and practice of systematically selecting the facts and theories of psychology with the intent of advising individuals on making their way in society.

20.08 03 Consulting Psychology

The study of the role and function of the psychologist as a consultant responding to the needs of diverse individuals and groups in a variety of settings.

20.08 04 Educational Psychology

The study, selection, and application of methods, facts, and theories of psychology that relate to individual learning in formal courses of instruction.

20.08 05 School Psychology

The study of the development of courses of training for school psychologists, and the selection of facts and theories relevant to working with the behavior of the individual child in the context of the school and other community organizations within which the child functions, including child-school, child-family, and child-community interactions. The study includes the identification and amelioration of individual behaviors and the identification and analysis of individuals and agencies to which the school child may look for assistance.

20.08 05 01 Academic Remediation

The study of the relationship of psychological factors to learning problems and the techniques of clinical remedial correction.

20.08 05 02 Behavior Management

The study of the application of psychological principles to the analysis of student behavior problems and the techniques for treating and ameliorating such behavior problems.

20.08 99 Other Psychological Programs (Specify)

20.09 PSYCHOLOGY IN ECONOMICS, INDUSTRY, AND GOVERNMENT

The study of the principles of selection, placement, training, motivation, and evaluation of individuals for work in industrial or governmental settings, and the application of psychological knowledge and methodology to specific work related problems.

20.09 01 Industrial Psychology

The study of the use and outcomes of psychological methodology in industry.

20.09 02 Personnel Psychology

The study of the process of selection, management, and motivation of individuals for specific responsibilities in industrial and other organizations.

20.09 03 Military Psychology

The study of the processes of selection, production, and application of psychological knowledge specifically related to the duties, organizations, and equipment of military personnel.

20.09 04 Organizational Psychology

The study of the behaviors of the individual as they determine the design and effectiveness of social, governmental, or military organizations, and are determined by them.

20.09 05 Consumer Psychology

The study of the individual's choice of a course of action in the purchasing and use of goods and services and including the role of advertising.

20.09 06 Human Engineering

The study of the behaviors of the individual, and the behavioral processes that must be considered in the design and function of organizations or equipment used in those organizations.

20.09 06 01 Man-Machine Systems

The study of the application of psychological principles and knowledge to the harmonious coordination of human resources and machine systems.

20.09 06 02 Work Environments

The study of the application of psychological principles and knowledge to the creation of work environments which result in increased employee satisfaction, productivity, and profitability.

20.09 06 03 Work Performance

The study of the application of psychological principles and knowledge to the development of training programs, performance standards, incentive plans, and evaluation procedures.

20.09 07 Program Evaluation

The study of the description and assessment of the performance of individuals in the design and execution of a program or project.

20.09 99 Other Psychology in Economics, Industry, and Government (Specify)

20.99 OTHER PSYCHOLOGY (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN PSYCHOLOGY, SEE APPENDIX E.

21 PUBLIC ADMINISTRATION AND SOCIAL SERVICES

Subject matter concerned with the formulation, implementation, administration, and evaluation of public policies, programs, and services, including those services which are directed toward the betterment of economic and social conditions.

21.01 PUBLIC ADMINISTRATION

The study of the knowledge, skills, values, and behaviors involved in the formulation of public policies and the management of public services.

21.01 01 Administrative Theory

The study of the principles and theories of the orderly process of serving public needs.

21.01 02 Organizational Theory and Behavior

The study of the theories and principles governing the behavior of individuals and groups in complex organizations serving public needs.

21.01 03 Administrative Management

The study of the principles and techniques of planning, organizing, and controlling public policies, programs, and services.

21.01 03 01 Administration of Public Buildings and Lands

The study of the principles and techniques of the administration of public buildings, and other facilities and material, in the process of serving public needs.

21.01 03 02 Personnel and Labor Relations in Government

The study and application of the principles and theories of recruiting, training, placing, and separating persons in public service, and of negotiating conditions of employment with representatives of public employees.

21.01 03 03 Financial Administration

The study of the principles, theories, and applications of administering public funds in the process of serving the public needs.

21.01 03 04 Information Systems

The study of the economic, political, and social significance and relationship of contemporary communication and information technologies to public administration.

21.01 04 Regulatory Administration

The study of the political and administrative aspects of governmental regulation of industry in the public interest.

21.01 05 Comparative Public Administration

The study and comparative analysis of public administration in two or more countries or regions, with special emphasis on public policies, procedures, and instructions.

21.01 06 International Administration

The study of the principles and theories underlying the structure and processes of major international organizations, such as the United Nations and the Organization of American States.

21.01 07 Legislative Administration

The study of the impact and relationship of the administration of legislative bodies on public policy and administration.

21.01 08 Court Administration

The study of the impact and relationship of the administration of the court system on public policy and administration.

21.01 09 Professional Practices in Public Administration

The study of the activities, attitudes, and responsibilities that characterize officials serving in a public capacity.

21.01 10 Public Policy and Science and Technology

The study of the role of government in the development of scientific and technological policies, the organization and management of scientific research, and in technological applications.

21.01 11 Public Policy and Natural Resources and Environments

The study of the role of the government in the development, regulation, and use of natural resources, and in the improvement and protection of the environment.

21.01 12 Policy Sciences

The study of social, economic, and political factors that impinge upon the decisionmaking process of legislative, executive, and other governmental agencies that formulate or influence public policy.

21.01 13 Public Policy Analysis and Evaluation

The study of the principles and techniques by which systematic judgments and evaluative assessments are made with respect to particular public policy.

21.01 14 Quantitative and Nonquantitative Analysis

The study of the principles and techniques of applying statistical and nonstatistical analysis to the problems of public policy, programs, and services.

21.01 99 Other Public Administration (Specify)

21.02 PUBLIC WORKS

The study of the role of the government in constructing, maintaining, and providing structures and utilities for use by the general public.

21.02 01 Public Transportation

The study of the theory, techniques, planning, and development of facilities and systems for transporting people and goods.

21.02 01 01 Public Mass Transit

The study of the theory, techniques, planning, and development of providing conveyance or transportation to large numbers of persons or goods by way of conveniences above and below ground level.

21.02 01 02 Public Streets and Highways

The study of the theory, techniques, planning, and development of constructing and maintaining transportation routes for the general public.

21.02 01 03 Public Ports, Harbors, and Terminals

The study of the theory, techniques, planning, and development of transportation points and facilities for passengers and freight, to serve the needs of the general public.

21.02 02 Public Sanitation

The study of the theory, techniques, planning, and development of provisions for the maintenance of the health and welfare of the general public.

21.02 03 Management of Public Facilities and Buildings

The study of the theory, techniques, planning, and development of the services required for the efficient operation and management of public facilities and buildings.

21.02 04 Public Utilities

The study of the theory, techniques, planning, and development of services such as electricity, waste removal, water, power, and transportation, which are owned and operated, or regulated by governmental agencies, on behalf of the general public.

21.02 99 Other Public Works (Specify)

21.03 SAFETY AND CORRECTIONAL SERVICES

The study of the principles and procedures for providing police, fire, and other safety services, and for managing penal institutions and rehabilitative services.

21.03 01 Correctional Services

The study of the theory, principles, and techniques used in incarceration, behavior modification, rehabilitation, and returning of legal offenders to society.

21.03 01 01 Organization and Administration of Correctional Services

The study of the theory and practices of structuring, managing, directing, and controlling agencies and organizations whose purpose it is to provide safety and correctional services.

21.03 01 02 Correctional Techniques and Procedures

The study of the techniques and procedures used in working with criminals in the process of rehabilitation, adjustment, and reentry to society.

21.03 01 03 Parole and Probation

The study of the principles and procedures for the gradual reentry of criminals from penal institutions into society.

21.03 01 04 Penology

The study of the principles, methods, and techniques of incarceration of criminals in penal institutions ranging from maximum to minimum security.

21.03 02 Fire Protection

The study of the principles and techniques of fire prevention, fire fighting, and rescue.

21.03 03 Industrial and Occupational Safety Services

The study of the principles and techniques of maintaining safe work environments in business and industry.

21.03 04 Law Enforcement

The study of the theories, principles, and techniques of administering and maintaining the safety and protection of people and property.

21.03 04 01 Criminal Investigation and Evidence

The study of the techniques and procedures for collecting information to be used in the investigation, apprehension, and conviction of law violators.

21.03 04 02 Law Enforcement Technology

The study of the techniques and procedures for utilizing the equipment, arms, and investigative devices that are used in law enforcement.

21.03 04 03 Organization and Administration of Law Enforcement

The study of the theory and practices of structuring, managing, directing, and controlling agencies whose purpose it is to provide law enforcement.

21.03 04 04 Police Management

The study of the principles and techniques of controlling, directing, and managing a police force and its equipment.

21.03 04 05 Police Problems

The study of the issues and problems of police persons in general, and of their relationship with their constituencies.

21.03 04 06 Police Procedures and Tactics

The study of the various procedures and tactics used in criminal apprehensions, daily routines, and other law enforcement activities.

21.03 05 Protective Services

The study of the principles and techniques for protecting persons and property by private and public law enforcement bodies.

21.03 99 Other Safety and Correctional Services (Specify)

21.04 SOCIAL WORK

The study of the form of social intervention which enhances, conserves, and augments the means by which persons, individually or collectively, can solve disruptions in their social existence.

21.04 01 Social Welfare

The study of the various services provided by a government or its agencies for the benefit of its citizens.

21.04 01 01 History of Social Welfare

The study of the changes over time that underlie significant events in the development of social welfare, including a time-related concern with the state, development, and programmatic and organizational expressions of social policy and philosophy.

21.04 01 02 Philosophy of Social Welfare

The study of the ideas, rational arguments, and positions concerning the provision by government and private agencies of conditions and services promoting the social, economic, civil, physical, and psychological well-being of people.

21.04 01 03 Organization of Social Welfare Services

The study of the social, administrative, and organizational structures developed to implement social welfare, philosophy, and policy, such as the social security system, public welfare system, and private organizations, including Child Welfare League, Family Service Society of America, United Way, Community Chest, and Community Welfare Associations or Councils.

21.04 01 04 Social Welfare Policy Formulation

The study of the descriptive, theoretical, and methodological approaches to the development of social welfare policy, including the application of values and data to policy formulation.

21.04 02 Social Work Practice

The study of organized practices and procedures that are directed toward the betterment of social conditions in the

community by seeking to improve the condition of the disadvantaged and promote the welfare of specific age groups.

21.04 02 01 History and Philosophy of Social Work

The study of the development over time of the efforts and results of attempts to establish and maintain social work as a profession, including emphasis on the historical aspects of its organizational efforts in practice and education.

21.04 02 02 Organization and Administration of Social Work

The study of the operation of social work organizations, including policy development and implementation at the agency level, personnel practices, budgeting, planning, fund raising, community and interagency relations, and staff development.

21.04 02 03 Social Work Research and Evaluation

The study of the methods and strategies of conducting research and building knowledge about social work by the practitioner, or by someone other than the practitioner, for the purpose of evaluating program impact.

21.04 02 04 Professional Practices in Social Work

The study of the belief system, code of ethics and standards of professional behavior, working conditions, and salaries of social work practitioners.

21.04 02 05 Public and Private Social Work Practice

The study of the principles and practices involved in the delivery of social services as part of a governmental administrative and service agency, or as provided in private practice, including codes of ethics and standards of professional behavior.

21.04 02 06 Social Work and Other Subject Matter

The study of the knowledge of social work as it is integrated with the substance of other subject matter, such as psychology, sociology, economics, political science, law, or medicine, and as other disciplines are modified for application to the practice of social work.

21.04 03 Social Work Methods

The study of the principles, methods, and techniques by which social work is carried on.

21.04 03 01 Social Case Work

The study of the theory and techniques of working alone with individuals or within the context of families or significant persons.

21.04 03 02 Social Group Work

The study of the theory and techniques of working with small formal or informal groups.

21.04 03 03 Community Organization and Development

The study of the theory and techniques of organizing and coordinating a network of social services in a community, including community planning, helping people solve community problems, or developing communities through the efforts of its citizens.

21.04 03 04 Prevention of Social Problems

The study of the theory and techniques involved in the practice of preventing foreseeable social problems and promoting desired social goals.

21.04 03 05 Social Work Consultation

The study of the theory, techniques, and practice of giving consultation to peers, other disciplines, or administrative and public representatives, as well as receiving such consultation from them.

21.04 03 06 Social Work Supervision

The study of the theory, techniques, and practice of social work supervision, including its educational and administrative components.

21.04 04 Fields of Social Work

The study of specific and identifiable social problems, populations at risk, institutions, and geographical locales of social service delivery.

21.04 04 01 Social Work of Age Groupings

The study of social problems and their remediation that relate specifically to individuals falling into particular age classifications, such as child, youth, adolescent, adult, or aged.

21.04 04 02 Social Work of Identifiable Sets of People

The study of social problems and their remediation that relate specifically to individuals who are women, blacks, members of ethnic groups, or who assert identifiable life-styles.

21.04 04 03 Social Work of Social Environments

The study of social problems and their remediation that relate specifically to particular social environments, such as schools, correctional institutions, business and industry, housing, and urban, rural, or international settings.

21.04 04 04 Social Work in Occupational Settings

The study of social problems and their remediation that relate specifically to particular occupational settings, such as factories, offices, out door sites, remote assignments, and to particular types of management-labor conditions such as migrant labor.

21.04 04 05 Social Work and Health Care

The study of social problems and their remediation that relate specifically to health conditions, such as mental health

and mental retardation, physical health, chemical dependency, and others that generally occur in health care settings.

21.04 04 06 Multiple Fields of Social Work

The study of social problems and their remediation that relate to combinations of one or more social settings, social environments, groups of various ages, or identifiable sets of persons.

21.04 05 Social Environments and Human Behavior

The study of the relationships between various social settings and the body of knowledge that centers on the physical and mental development of human beings, and the impact of those relationships on the field of social work.

21.04 05 01 Human Development

The study of the description and theoretical explanation of normal human development and the factors conducive to that normal development.

21.04 05 02 Deviant Behavior

The study of the description and theoretical explanation of non-normal development and the factors responsible for such development.

21.04 05 03 Family Dynamics and Relationships

The study of the family as a social entity, including the psychological aspects of intrafamily interactions.

21.04 05 04 Social Impact of Institutions

The study of the impact of societal organizations and institutions on human psychological states and social functioning, including schools, prisons, hospitals, and public welfare agencies.

21.04 05 05 Physical and Mental Illness

The study of the sociopsychological causes of physical and mental illness in which description and explanation are stressed.

21.04 05 06 Social Impact of Environments

The study of the combinations of social, cultural, economic, sexual, racial, geographical, genetic, and community factors with environmental complexes and their impact on the development and functioning of people.

21.04 05 07 Social Problems

The study of all populations at risk and their needs, including mentally retarded, the aged, mentally and physically ill and disabled, children born out of wedlock, chemically dependent, and the economically and socially oppressed.

21.04 99 Other Social Work (Specify)

21.05 PUBLIC RECREATION

The study of the principles and procedures of providing recreational facilities and services for the benefit of the general public.

21.05 01 Recreational Environments

The study of the principles and procedures for designating and for maintaining the quality and use of public areas in which recreational activities take place.

21.05 02 Community Recreation

The study of the principles and procedures of implementing recreational activities to serve the expressed needs of a community.

21.05 03 Public Recreation Administration

The study of the principles and procedures of planning, organizing, staffing, financing, directing, coordinating, evaluating, and reporting public recreational programs.

21.05 99 Other Public Recreation (Specify)

21.99 OTHER PUBLIC ADMINISTRATION AND SOCIAL SERVICES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN PUBLIC ADMINISTRATION AND SOCIAL SERVICES, SEE APPENDIX E.

22 SOCIAL SCIENCES AND SOCIAL STUDIES

Subject matter concerned with the substantive portions of behavior, past and present activities, interactions, and organizations of people associated together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes, and the procedural works of social inquiry that have been selected and adopted for use in instructional situations.

22.01 ANTHROPOLOGY

The study of the origins, physical and cultural development, racial characteristics, social customs, and beliefs of historic and prehistoric humans.

22.01 01 Archaeology

The study of historic and prehistoric peoples and their cultures through the scientific analysis of their artifacts, inscriptions, monuments, and other remains.

22.01 01 01 Ethnoarchaeology

The study of the development of art, music, literature, religion, and other cultural aspects of historic and prehistoric peoples through scientific analysis of their remains.

22.01 01 02 Environmental Archaeology

The study of the principles of using field and laboratory techniques to reconstruct past environmental conditions in which historic or prehistoric peoples once lived.

22.01 01 03 Regional Archaeology

The study of the cultural development, family structure, political organizations, and group structures of historic and prehistoric dwellers of designated regions or areas.

22.01 02 Cultural Anthropology

The study of the historical development of the world's cultures with emphasis on learned and shared behavior.

22.01 03 Ethnography

The study of the principles and techniques of scientifically studying and describing individual cultures of historic and prehistoric peoples.

22.01 04 Ethnology

The study of the origin, distribution, and distinguishing characteristics of various cultures and races, and the similarities and dissimilarities between them.

22.01 05 Linguistics in Anthropology

The study of the principles and techniques of using linguistic theory and practice as tools in anthropological field work, including the analysis of phonological, morphological, and syntactic characteristics of world languages.

22.01 06 Physical Anthropology

The study of the biological and evolutionary theories of the development of human physical characteristics, including mammalian and primate evolution and behavior, fossil humans, genetics and inheritance, theories of race, and the evolution of the brain.

22.01 07 Social Anthropology

The study of the nature and development of historic and prehistoric social systems, including kinship, economics, politics, social structures, and the nature, process, and function of social, political, and religious movements.

22.01 08 Research Methodology

The study of the principles and techniques of identifying areas of inquiry, formulating concepts and hypotheses, developing the logic of experimental design and sampling, constructing indices, scales, and typologies, conducting field work and laboratory analysis, and analyzing and interpreting data in anthropological studies.

22.01 08 01 Field Methodology

The study of the principles and techniques used in on-site anthropological field studies, including artifact analysis.

22.01 08 02 Laboratory Techniques

The study of the principles and methods of artifact analysis, preservation, cartography, photography, floral and faunal analysis, and site reporting as used in laboratory conducted anthropological studies.

22.01 09 Topical Anthropology

The study of a variety of issues, problems, and topics in the various branches of anthropology.

22.01 99 Other Anthropology (Specify)

22.02 ECONOMICS

The study of the transformation of limited resources into goods and services which, upon distribution, are again transformed by consumption to yield satisfaction of human wants.

22.02 01 Principles and Theory of Economics

The study of the theories, principles, and methods of economics.

22.02 01 01 Macroeconomic Theory

The study of economic theories and statistical analyses that deal with aggregates or groups of individuals or commodities, including such factors as total consumption, employment, and income.

22.02 01 02 Microeconomic Theory

The study of economic theories and statistical analyses that deal with particular individuals or commodities, including such factors as the demand for wheat, or employment conditions in the automotive industries.

22.02 02 History of Economics

The study of the development, trends, and changes in the principles and theories of economic systems over extended periods of time.

22.02 03 Economic Policy

The study of the creation, development, and application of economic policy originating in the private or public sector.

22.02 04 Monetary and Fiscal Theory and Institutions

The study of the principles and theory of financial and monetary foundations, including the financial and real aspects of saving and investment, interest rate forecasting, financial modeling, and the money supply.

22.02 05 National Income

The study of the principles and theories of leveling, growth, stability, and composition of a nation's or region's income, including the influence of taxing, borrowing, and spending at Federal, State, and local levels.

22.02 06 Public Finance

The study of the theories, policies, and practices used by local, State, or Federal governments in generating revenues and managing public monies.

22.02 07 Economic Growth and Development

The study of the principles of applying analytical and quantitative techniques to historical questions concerning sources and rate of growth, relationships between growth and institutional change, and the impact of industrialization on the standard of living.

22.02 08 Consumer Economics

The study of the economic principles and theories associated with the interaction of individual consumers, or groups of consumers, with the production and consumption of goods and services.

22.02 09 Comparative Economic Systems

The study of the differences among economies in their arrangements for the production, distribution, and consumption of goods and services; the differences among economic explanations of the production, distribution, and consumption of goods and services; and the evolution of economies toward industrialism, the growth of the world economy, and the growth of international trade.

22.02 10 Economics of Human Resources

The study of the methods of analyzing an individual's education, skills, and potential, and the utilization of this information in formulating economic plans and policies.

22.02 11 Labor and Manpower Economics

The study of the employment of the labor resource, and its wages, employment conditions, and organization into unions; capital resources and the manmade instruments of production; and natural resources such as land, mineral wealth, and water.

22.02 12 Economics of Natural Resources

The study of the extent and potential use of wealth supplied by nature, including the analysis of soil fertility, mineral deposits, and water power.

22.02 13 Business and Industrial Economics

The study of the principles and methods for organizing a business firm and for combining resources to produce goods and services, taking account of costs, prices, profits, and the nature and extent of competition in markets.

22.02 13 01 Industrial Organization

The study of the theory and structure of business and industry, including the principles of invention and innovation, pricing, profit making, antitrust, competition, and conservation.

22.02 13 02 Industry Studies

The study of alternative industrial organizations, and their impact on public policy.

22.02 13 03 Economics of Industrial Change

The study of the financial aspects of alternative industrial structures and their impact on supply and demand, pricing, and business cycles.

22.02 14 International Economics

The study of international trade, finance, investment, and money supply; foreign exchange; foreign aid; and tariffs.

22.02 14 01 International Finance

The study of principles and techniques of conducting financial transactions among nation states, including such topics as money markets, the gold standard, and exchange rates.

22.02 14 02 International Trade

The study of the principles and techniques involved in trade transactions among nation states, including tariffs, the balance of payments, and common market transactions.

22.02 15 Social Economics

The study of the principles and theories relating to the economic effects of social legislation and social policies.

22.02 16 Urban and Rural Economics

The study of the principles and theories of economics that relate to rural and urban areas and to their distinct positions in the overall economy.

22.02 17 Quantitative Economics

The study of the principles and methods of applying quantitative methods to the testing of economic theory, including the making of future economic projections.

22.02 17 01 Econometrics

The study of principles and techniques of using mathematical and statistical methods to verify and develop economic theories.

22.02 17 02 Economic Forecasting

The study of the principles and techniques of projecting economic conditions into the future.

22.02 99 Other Economics (Specify)

22.03 GEOGRAPHY

The study of the earth and its life; the description of land, sea, and air; and the distribution of plant and animal life, including human beings and their industries.

22.03 01 Cultural Geography

The study of the economic, social, and political activities of human beings as those activities are distributed over the surface of the earth.

22.03 01 01 Political Geography

The study of the effect and interrelationships of human political activities on geographic features, including size of governments and political boundaries.

22.03 01 02 Social Geography

The study of the interrelationships between human society and geographic features, and the effect those interrelationships bring about.

22.03 02 Economic Geography

The study of the effect and interrelationships of the production, distribution, and consumption of goods and resources with respect to geographical features.

22.03 02 01 Agricultural Environments

The study of geographical and ecological environments within agricultural areas, such as their suitability for growing crops.

22.03 02 02 Industrial Environments

The study of the geographical and ecological environments that are involved in manufacturing and production.

22.03 02 03 Locational Analysis

The study of the principles and methods for analyzing nodal points, including the analysis of geographic barriers and economic corridors.

22.03 03 Historical Geography

The study of the developments, changes, events, discoveries, trends, and other phenomena associated with geography over extended periods of time.

22.03 04 Geographic Research Methods and Techniques

The study of the principles, methods, and techniques for conducting geographic research and projects.

22.03 04 01 Cartography

The study of the theories, methods, and techniques for making and producing maps.

22.03 04 02 Geographic Field Methods

The study of the principles and techniques used in on-site geographic field studies.

22.03 04 03 Remote Sensing

The study of the principles and techniques of identifying and determining characteristics of physical objects through analysis of data from a measuring device that does not come in contact with these objects, including aerial photography, radar imagery, infrared photography, and multispectral scanner imagery produced by remote sensing techniques.

22.03 05 Physical Geography

The study of the exterior physical features and changes of the earth in land, water, and air.

22.03 05 01 Biogeography

The study of the geographic distribution of living things, their activities, and how they affect the physical earth.

22.03 05 02 Geomorphology

The study of the earth's land forms or surface features, and the distribution of land and water, including changes incurred by the raising of mountains and erosion.

22.03 05 03 Oceanography

The study of the ocean and its phenomena, including the physical and chemical properties of water; the typography and composition of the ocean bottom; waves, currents, and tides; and the formation of islands.

22.03 05 04 Soils Geography

The study of the various compositions of soils and of the principles of fertility, irrigation, and cultivation as applied to the earth's surface.

22.03 06 Regional Geography

The study of the geography of an area of any size that is homogeneous with respect to specific criteria, including the boundaries of states and their subdivisions.

22.03 06 01 Specialized Regional Environments

The study of the geography of particular regional environments with respect to features which make them distinct or unique.

22.03 06 02 Specialized Regional Land Masses

The study of the geography of particular regional land masses with respect to features which make them distinct or unique.

22.03 06 03 Specialized Regional Political States

The study of the geography of particular regional political states with respect to features which make them distinct or unique.

22.03 07 Transportation Geography

The study of the various modes of transportation and their interaction with the geographic environments in which they are found.

22.03 08 Urban Geography

The study of the geographical features of urban areas, including cities and metropolitan population centers.

22.03 99 Other Geography (Specify)

22.04 HISTORY — THEMATIC, AREA, PERIOD, AND PERSON

The study of the past, including the recording, gathering, criticizing, synthesizing, and interpreting evidence about past events.

22.04 01 Constitutional and Administrative History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the United States Constitution and the administrative processes of the Federal government.

22.04 02 Diplomatic History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the art of conducting negotiations between nations, or of transacting international business.

22.04 03 Economic History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with wealth, its nature, production, distribution, and consumption and accompanying relationships.

22.04 04 Historiography

The study of the literature, philosophy, methods, and methodology of the subject matter of history.

22.04 05 History of Science

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with systematized knowledge, or the branches of knowledge that are characterized by observation, experiment, facts, laws, and skills.

22.04 06 Intellectual and Cultural History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with understanding, reasoning, and training of the mind or behavioral faculties.

22.04 07 Political History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the methods and policies of governments, politicians, and political parties.

22.04 08 Religious History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with systems of faith or worship in a supreme being, ethical values, or a philosophy of life.

22.04 09 Social History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the interactions of human beings in matters affecting their common welfare.

22.04 20 African History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the continent of Africa and its inhabitants.

22.04 21 American Colonial History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the thirteen British colonies which became the United States of America during the seventeenth and eighteenth centuries.

22.04 22 Antarctic History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the continent of Antarctica and its inhabitants.

22.04 23 Asian History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the Asian continent and its inhabitants.

22.04 24 British History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with Great Britain, the British Commonwealth, or its inhabitants.

22.04 25 Canadian History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the nation of Canada and its inhabitants.

22.04 26 European History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the continent of Europe and its inhabitants.

22.04 27 Latin American History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with that part of the American continents south of the United States and its inhabitants.

22.04 28 Local and State History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with designated States, regions, or areas of the United States.

22.04 29 Mediterranean History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the regions and nation states surrounding the Mediterranean Sea.

22.04 30 Oceanian History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the islands of the central and south Pacific, including Micronesia, Melanesia, and Polynesia.

22.04 31 Russian History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with Russia and its inhabitants.

22.04 32 United States History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the United States of America and its inhabitants.

22.04 33 World History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the nation states and inhabitants of the world.

22.04 50 Ancient History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the period before the end of the Western Roman Empire.

22.04 51 Contemporary History

The study of the development, changes, events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the present time.

22.04 52 Medieval History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the Middle Ages, usually dated A.D. 700 to 1500.

22.04 53 Modern History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the time period following the Middle Ages, usually dated after 1500 A.D.

22.04 70 Minority Group History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with groups that differ in race, religion, or ethnic background from the majority of a population.

22.04 71 Native American History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with the original inhabitants of North America and their racial and ethnic descendants.

22.04 72 History of Women

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artifacts, and the systematic accounting of other phenomena associated with women.

22.04 99 Other History – Thematic, Area, Period, and Person (Specify)

22.05 POLITICAL SCIENCE AND GOVERNMENT

The study of the description and analysis of political institutions and processes, and including the origin, development,

geographical units, forms, sources of authority, powers, purposes, functions, and operations of government.

22.05 01 American Government

The study of the processes and structures of governance within the United States at the local, State, and national levels.

22.05 02 Citizenship

The study of the rights and responsibilities of membership in a given polity and the development of understandings and attitudes conducive to effective participation in the civic affairs of that polity.

22.05 03 Comparative Political Systems

The study and comparative analysis of the similarities and differences of political institutions, processes, and behavior in different countries and political subdivisions.

22.05 03 01 African Political Systems

The study of the development, organization, and operation of the political institutions and behavior of the sub-Sahara African countries; including the influence of social and cultural structures, the source and nature of political ideologies, and the formation and influence of political parties and special interest groups.

22.05 03 02 Asian Political Systems

The study of the development, organization, and operation of the political institutions and behavior of the countries and political subdivisions of the Asian continent; including the influence of social and cultural structures, the source and nature of political ideologies, and the formation and influence of political parties and special interest groups.

22.05 03 03 Communistic Political Systems

The study of the development, organization, and operation of the political institutions and behavior of the countries and political subdivisions throughout the world that embrace the theories and systems of communism, including the influence of social and cultural structures, the source and nature of political ideologies, and the formation and influence of political parties and special interest groups.

22.05 03 04 Latin American Political Systems

The study of the development, organization, and operation of the political institutions and behavior of the countries south of the United States that are a part of the American continents, including the influence of social and cultural structures, the source and nature of political ideologies, and the formation and influence of political parties and special interest groups.

22.05 03 05 Middle Eastern Political Systems

The study of the development, organization, and operation of the political institutions and behavior of the countries lying east of the Mediterranean and Aegean Seas to India, including the influence of social and cultural structures, the source and nature of political ideologies, and the formation and influence of political parties and special interest groups.

22.05 03 06 Western European Political Systems

The study of the development, organization, and operation of the political institutions and behavior of the noncommunist countries of Europe, including the influence of social and cultural structures, the source and nature of political ideologies, and the formation and influence of political parties and special interest groups.

22.05 04 Contemporary World Affairs

The study of economic, sociological, political, legal, cultural, and other factors which influence the present relations between nations.

22.05 05 International Relations

The study of agencies, operations, and principles involved in communication and interaction among nations, with emphasis upon the relationship between political subdivisions and governments.

22.05 05 01 American Foreign Policy

The study of the history and development and principles and methods associated with the relationship of the United States government toward other nations.

22.05 05 02 Comparative Foreign Policy

The study and comparative analysis of the principles and methods by which the governments and nations of the world interact with each other.

22.05 05 03 Foreign Policy Formulation

The study of the principles and procedures by which foreign policy is developed by groups and individuals inside and outside government.

22.05 05 04 International Organizations

The study of the structure, operations, and policies of the political, economic, and social organizations of the world.

22.05 06 Political Behavior

The study of theories, methods, and principles associated with the political behavior of individuals, groups, organizations, and governments.

22.05 07 Political Parties and Public Opinion

The study of development, organization, and operation of political parties and pressure groups as influenced or guided by public opinion.

22.05 08 Political Socialization

The study of ways in which society transmits political orientations, including knowledge, norms, and practices, from one generation to the next.

22.05 09 Political Structures

The study of the various organizational bodies and entities which constitute a political system.

22.05 10 Political Theory

The study of various political theories and philosophies and of the development of modern methodological techniques related to the analysis of political science.

22.05 10 01 American Political Theory

The study of the historical development and cultural influence of political thought of the United States, including the role of politicians, novelists, and academicians, and such theories as puritanism, liberalism, conservatism, and populism.

22.05 10 02 Communism

The study of the historical development and cultural influence of the system of social organization based on the holding of all property in common, actual ownership being ascribed to the community as a whole or to the state.

22.05 10 03 Ethics and Politics

The study of the role and influence of moral foundations, including liberty, authority, and equality, on the historical development of political theory.

22.05 10 04 Political Ideology

The study of the role and influence of natural laws, churches or other religious bodies, and historical developments on the formulation of political theory, including such ideology as utopia.

20.05 11 State and Local Government

The study of the principles, theories, and development of the structure and policies of State and local governments and their agencies.

22.05 99 Other Political Science and Government (Specify)

22.06 SOCIOLOGY

The study of human society, social institutions, and social relationships, including the development, purposes, structures, and functions of human groups.

22.06 01 Community Sociology

The study of the social organization of a cluster of family groups in a given locality that are linked by a consciousness of similarities in attitudes, values, and problems.

22.06 02 Criminology

The study of the causes of crime and the methods of detecting and dealing with crime and the criminal, including crime statistics, theories of punishment, and the role of law enforcement in society as an agent for the prevention and treatment of crime.

22.06 03 Demography and Human Ecology

The study of vital social statistics, including births, deaths, diseases, marriages, and education rates of populations.

22.06 03 01 Population Change

The study of the dynamics of population change, including the effects of births, deaths, and migrations.

22.06 03 02 Population Problems

The study of the problems associated with the ability to monitor populations and of the influence of such factors as overpopulation, mortality, and fertility.

22.06 03 03 Population Theory

The study of the cultural and social phases of population change, and the implication of birth and death rates and migration on such changes.

22.06 04 Juvenile Delinquency

The study of youths, usually under 18 years of age, whose behavior is characterized by antisocial behavior, violations of the law, disobedience, or intractability which generally requires action by the juvenile court system.

22.06 05 Marriage and Family

The study of the traditions and roles of courtship behavior and marriage, and family structures and relationships of the different cultures of the world.

22.06 05 01 Marriage and Family Counseling

The study of the theories, principles, and techniques of helping people to identify, deal with, and resolve problems related to marriage and family living.

22.06 05 02 Sociology of Marriage

The study of the history and development of the institution of marriage, including the role of partners, legal sanctions, customs and folklore, and processes of union and dissolution.

22.06 05 03 Sociology of the Family

The study of the development of the family unit, including the analysis of member roles, unity and disunity, and comparative family organizations and forms.

22.06 06 Principles and Theory of Sociology

The study of the history and development of the components of human society, the theories of social structure and conflict, and the comparative analysis of various social systems.

22.06 06 01 Comparative Sociology

The study of the similarities and differences between social institutions and relationships in different countries and cultures.

22.06 06 02 History and Development of Sociology

The study of the development, change, and trends in social institutions and relationships, and the systematic accounting of past events in human societies.

22.06 06 03 Theory of Social Conflict

The study of the origins, historical development, and philosophical bases of wars, feuds, revolutions, and other forms of discord in social groups.

22.06 06 04 Theory of Social Structures

The study of the structures and processes that govern social groups, including the concepts of leadership, norms, roles, status, motivation, communication, cooperation, and competition.

22.06 07 Psychological Sociology

The study of the relationship of the individual to social groups with emphasis on the socialization process, cultural influences, social organization and disorganization, symbolic interaction, mass behavior, and attitudes.

22.06 07 01 Collective Behavior

The study of the dynamics of organizational and occupational memberships, particularly those which are based upon racial or ethnic factors.

22.06 07 02 Socialization

The study of the dynamics of role and symbolic social interaction with emphasis on the influence of sex roles.

22.06 08 Rural Sociology

The study of the influence of the family, school, church, local government, and health and welfare on the social development of groups and individuals in designated rural areas.

22.06 09 Quantitative Methods

The study of the principles and techniques of designing experiments, and using mathematical and statistical methods in Sociology.

22.06 10 Social Control and Deviance

The study of group behaviors and the methods by which they enforce behavioral expectations and discourage deviations from the norm, with emphasis on the use and misuse of drugs, narcotics, and alcohol, and suicide, homicide, and sex offenses.

22.06 11 Social Institutions

The study of the theory, development, composition, structure, and goals of social institutions and their interactions with the members of society, with emphasis on the institutions of religion, medicine, science, and education.

22.06 12 Social Organization and Change

The study of the nature and characteristics of groups, institutions, and agencies that comprise the structure of society.

22.06 12 01 Social Stratification

The study of the nature and characteristics of hierarchical groups in society, such as social classes and castes.

22.06 12 02 Futuristics

The study of possible alternative future forms of social organizations and institutions.

22.06 12 03 Social Structure

The study of the development, pattern, and maintenance of economic, political, and social institutions and their integration and disintegration with various social groups.

22.06 12 04 Social Movements

The study of the impact upon individual and social structures of rapid social change and cultural contact, including reform, revolution, and rapid technological change.

22.06 13 Social Problems

The study of the theory, nature, and cause of family disorganization, population imbalances, delinquency, crime, poverty, and ethnic group conflicts that involve the maladjustment of groups and individuals and causes conflict in society.

22.06 14 Urban Sociology

The study of the influence of ecological and institutional factors on the social development of groups and individuals in designated urban areas.

22.06 15 Sociology of Groups

The study of the theories and principles involved with the interaction of individuals and groups, and groups with other groups, in identified segments of society.

22.06 15 01 Black Studies

The study of the role of blacks in contemporary society, including their socioeconomic status, dominant-minority status, legal status, attitudes, and ideological orientation as they are affected by school desegregation, housing, civil rights activities, and other social phenomena.

22.06 15 02 Race and Minority Group Relations

The study of the dynamics of assimilation, immigration, and interracial and intercultural conflicts of racial and minority groups in society.

22.06 15 03 Women Studies

The study of the role of women in contemporary society, including their socioeconomic status, dominant-minority status, legal status, attitudes, and ideological orientation as they are affected by existing social phenomena.

22.06 15 04 Small Groups

The study of the nature of role differentiation, group uniformity, problem solving behavior, status and power, interpersonal exchanges, and social processes of small numbers of individuals who are members of designated groups.

22.06 99 Other Sociology (Specify)

22.99 OTHER SOCIAL SCIENCES AND SOCIAL STUDIES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

FOR CONSIDERATION OF CODING, RECORDING, AND REPORTING MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY) IN SOCIAL SCIENCES AND SOCIAL STUDIES, SEE APPENDIX E.

APPENDIXES

A. Difficulty of Subject Matter

B. Level of Subject-Matter Instruction

C. Organization Providing Instruction

D. Type of Instructional Program

E. Multiple Subject Matter (Interdisciplinary)

INTRODUCTION

Subject matter is only one dimension of educational information. When it is combined with other dimensions, the recording and reporting of educational data is enhanced. In this document, educational subject matter is the primary dimension. Four additional dimensions are included in appendixes A through D: difficulty of subject matter, level of subject-matter instruction, organization providing instruction, and type of instructional program. Two additional dimensions which are often used in educational data recording and reporting, type of award and type of student, are found in other NCES documents.

Each dimension, including the subject matter classification, is conceptually discrete from every other dimension of educational information in that the elements of one dimension do not duplicate the elements of another. Each dimension constitutes a separate structure serving a unique purpose. They can, however, be combined when recording and reporting educational data to produce a comprehensive description of information about subject matter. This document does not propose to direct the user on how the dimensions should be combined. That will be dependent upon reporting requirements and data collection and storage procedures.

Appendix E deals with the coding, recording, and reporting of multiple, or interdisciplinary, subject matter (i.e., when a basic unit of instruction consists of two or more distinct subject matter elements within a single first-order subject matter area or in separate subject-matter areas).

APPENDIX A
DIFFICULTY OF SUBJECT MATTER

Difficulty of subject matter denotes the degree of comprehensiveness, competency, or literacy about a particular body of knowledge. It can also describe the level of detail or explicitness of subject matter as presented in a learning situation, regardless of the setting.

When the difficulty designator is added to the coded subject-matter element, it denotes an extent to which a student may acquire knowledge about that specific element.

The three major reporting categories, introductory, intermediate, and advanced, are listed and described below.

1. INTRODUCTORY SUBJECT MATTER

The position at which a student establishes initial contact with an organized body of knowledge comprising substance in any subject-matter area. This designation presumes no prerequisite learning on the part of the student.

2. INTERMEDIATE SUBJECT MATTER

The position at which a student may achieve an understanding of the elementary concepts and general applications of substance in a particular subject-matter area, but would not acquire advanced knowledge or higher levels of comprehension. This designation presumes prerequisite learning of introductory subject matter.

3. ADVANCED SUBJECT MATTER

The position at which a student may achieve a high degree of competency and understanding of an organized body of knowledge comprising substance in any subject-matter area that would stand apart or above normal levels of comprehension. This designation presumes prerequisite learning of intermediate subject matter.

APPENDIX B
LEVEL OF SUBJECT-MATTER INSTRUCTION

Level of Subject-Matter Instruction refers to the general nature and complexity of instruction. When this dimension is combined with the dimension of subject matter, the two can reveal a hierarchical array of learning experiences that may be provided in one of several educational settings. Subject matter can then be related to the progressive acquisition of knowledge that is nominally defined by a particular year on a grade or class scale. Level of Subject-Matter Instruction does not reflect the setting in which the subject matter is presented, nor the organizational unit responsible for providing the instruction. It does reflect a generalized degree of competency or literacy in subject matter. The array of levels assumes a step-by-step accumulation of knowledge. Each level can then be used to define a point on the continuum of learning.

The array of levels of subject-matter instruction is actually a combination of two lists. For general purposes, and to report data that includes more than one grade or year, entries ending in zero may be used. If specific grade or year data are required, entries other than those ending in zero should be used. If, for example, middle school were to be reported as a level, the specific grade or year designations would be used in the absence of a general category.

10 PRE-ELEMENTARY INSTRUCTIONAL LEVEL

The general level of subject-matter instruction provided for children who have not yet reached the age of maturity required for enrollment in the elementary grades.

11 Prekindergarten

The general level of subject-matter instruction provided for children during the year or years preceding enrollment in kindergarten.

12 Kindergarten

The general level of subject-matter instruction provided for children during the year immediately preceding the first grade.

20 ELEMENTARY INSTRUCTIONAL LEVEL

The general level of subject-matter instruction provided for pupils in elementary schools and any instruction of a comparable nature and difficulty provided for adults and youth beyond the age of compulsory school attendance regardless of where it is taught. This level does not presume prerequisite instruction at an earlier level although students may possess competencies gained through nursery school or kindergarten. Levels of instruction within elementary school presume prerequisite learning at an adjoining level. Elementary instruction begins with the first grade or year and may contain various numbers of grades up to the start of secondary instruction.

21 First Grade or Year

The general level of subject-matter instruction provided for pupils during the first year of elementary school.

22 Second Grade or Year

The general level of subject-matter instruction provided for pupils during the second year of elementary school.

23 Third Grade or Year

The general level of subject-matter instruction provided for pupils during the third year of elementary school.

24 Fourth Grade or Year

The general level of subject-matter instruction provided for pupils during the fourth year of elementary school.

25 Fifth Grade or Year

The general level of subject-matter instruction provided for pupils during the fifth year of elementary school.

26 Sixth Grade or Year

The general level of subject-matter instruction provided for pupils during the sixth year of elementary school.

27 Seventh Grade or Year

The general level of subject-matter instruction provided for pupils during the seventh year of elementary school.

28 Eighth Grade or Year

The general level of subject-matter instruction provided for pupils during the eighth year of elementary school.

30 SECONDARY INSTRUCTIONAL LEVEL

The general level of subject-matter instruction provided for pupils in secondary schools and any instruction of a comparable nature and difficulty provided for adults and youth beyond the age of compulsory school attendance regardless of where it is taught. This level of instruction presumes prerequisite learning at the elementary level. Each subsequent level within secondary instruction presumes prerequisite learning at an earlier, adjoining level. Secondary instruction ends at the twelfth grade and may contain various numbers of earlier grades.

31 Ninth Grade or Year

The general level of subject-matter instruction provided for pupils during the first year of secondary school.

32 Tenth Grade or Year

The general level of subject-matter instruction provided for pupils during the second year of secondary school.

33 Eleventh Grade or Year

The general level of subject-matter instruction provided for pupils during the third year of secondary school.

34 Twelfth Grade or Year

The general level of subject-matter instruction provided for pupils during the fourth year of secondary school.

40 LOWER DIVISION COLLEGIATE INSTRUCTIONAL LEVEL

The general level of subject-matter instruction provided for students in colleges, universities, and community and junior colleges during the first two years, usually considered the freshman and sophomore years, and any instruction of a comparable nature and difficulty provided for adults and youth beyond the age of compulsory school attendance. This level presumes prerequisite learning at the secondary level or demonstrated competencies gained through life experiences.

41 First Year Postsecondary

The organized level of subject-matter instruction within a college or university, vocational-technical institute, or community and junior college that is provided for students in the first year following a secondary instructional program or its equivalent.

42 Second Year Postsecondary

The organized level of subject-matter instruction within a college or university, vocational-technical institute, or community and junior college that is provided for students in the second year following a secondary instructional program or its equivalent.

50 UPPER DIVISION COLLEGIATE INSTRUCTIONAL LEVEL

The general level of subject-matter instruction provided for students in colleges, universities, and community and junior colleges who have met lower division requirements, and who are usually enrolled in their junior and senior years, and any instruction of a comparable nature and difficulty provided for adults and youths beyond the age of compulsory school attendance.

51 Third Year Postsecondary

The organized level of subject-matter instruction within a college or university for students in their junior year or its equivalent.

52 Fourth Year Postsecondary

The organized level of subject-matter instruction within a college or university for students in their senior year or its equivalent.

60 GRADUATE INSTRUCTIONAL LEVEL

The organized level of subject-matter instruction provided to students who are enrolled in graduate school. The level is

generally equated with the senior year in college or one or more years beyond graduation or its equivalent.

61 First Year Graduate

The organized level of subject-matter instruction that is provided to students who are in their first year in a graduate school of a college or university. This level usually follows the award of a baccalaureate degree.

62 Second Year Graduate

The organized level of subject-matter instruction that is provided to students who are in their second year in a graduate school of a college or university.

63 Third Year Graduate

The organized level of subject-matter instruction that is provided to students who are in their third year in a graduate school of a college or university.

64 Fourth Year Graduate

The organized level of subject-matter instruction that is provided to students who are in their fourth year in a graduate school of a college or university.

70 PROFESSIONAL INSTRUCTIONAL LEVEL

The organized level of subject-matter instruction within a college or university that is provided for students who are pursuing a designated professional degree, following two or more years of postsecondary education.

71 First Year Professional

The organized level of subject-matter instruction within a college or university that is provided for students who are in the first year of pursuing a designated professional degree, following two or more years of postsecondary education.

72 Second Year Professional

The organized level of subject-matter instruction within a college or university that is provided for students who are in the second year of pursuing a designated professional degree, following two or more years of postsecondary education.

73 Third Year Professional

The organized level of subject-matter instruction within a college or university that is provided for students who are in the third year of pursuing a designated professional degree, following two or more years of postsecondary education.

74 Fourth Year Professional

The organized level of subject-matter instruction within a college or university that is provided for students who are in the fourth year of pursuing a designated professional degree, following two or more years of postsecondary education.

80 POSTGRADUATE INSTRUCTIONAL LEVEL

The organized level of subject-matter instruction provided to students who have acquired a graduate degree from a college or university, or who have attained equivalent status.

99 OTHER LEVEL OF SUBJECT-MATTER INSTRUCTION (SPECIFY)

APPENDIX C
ORGANIZATION PROVIDING INSTRUCTION

The designation of type of organization providing instruction is used in educational data recording and reporting to identify the unit that retains primary responsibility for providing subject-matter instruction to students. In certain settings, two or more organizational units may share this responsibility. In establishing primary responsibility, however, consideration should be given to the provision of financial support, facilities, and other resources.

100 GENERAL ELEMENTARY AND SECONDARY SCHOOLS

Schools for elementary and secondary students which provide instruction that begins with the rudiments of learning and continues through grade 12.

110 Preschool

A school which provides instruction for children between infancy and compulsory school age; usually preceding kindergarten, or elementary school.

120 Elementary School

A school that is classified as elementary by State and local practice and is composed of any span of grades not above grade 8. The organizational pattern and number of grades may vary as for example, K-6, K-8, and 1-6.

121 Primary School

A separately organized and administered elementary school for students at the primary level, usually including grade 1 through grade 3, or the equivalent.

122 Intermediate Elementary School

A separately organized and administered elementary school for students between the primary and upper elementary grades, usually including grades 4, 5, and 6.

123 Upper Elementary School

A separately organized and administered elementary school for students following the intermediate grades, usually grades 7 and 8 in an 8-4 grade system.

130 Middle School

A separately organized and administered school that usually begins with grade 5 or 6 or its equivalent, and includes at least three grades or years. Most middle schools presume a 4-year high school for the grades or years which follow, as in a 4-4-4 plan or a 5-3-4 plan.

140 Secondary School

A school that is classified as secondary by State and local practice and is composed of any span of grades ending with grade 12 which follows a recognized elementary school. The organizational pattern and number of grades may vary as for example, 7-12, 8-12, 9-12, or 10-12.

141 Junior High School

A separately organized and administered secondary school that provides instruction between the elementary and senior high schools, and usually includes grades 7, 8, and 9 in a 6-3-3 plan, or grades 7 and 8 in a 6-2-4 plan.

142 3-Year High School

A 3-year secondary school which follows elementary school in a 9-3 plan, or junior high school on a 6-3-3 plan.

143 4-Year High School

A 4-year secondary school which follows elementary school in an 8-4 plan, middle school on a 4-4-4 plan, or junior high school on a 6-2-4 plan.

144 5-6-Year High School

A secondary school which is served by one faculty, organized under one principal, includes more than four grades, is not divided on a junior and senior high basis, and is not preceded by a junior high school in the same school system.

145 Senior High School

A secondary school offering the final grades of high school that are necessary for graduation and which are usually preceded by a junior high school on either a 3-3 or 2-4 plan.

150 Vocational-Technical School

A secondary school which is separately organized and administered for the primary purpose of offering education and training in one or more semiskilled, skilled, or technical occupations.

199 Other General Elementary and Secondary Schools (Specify)

200 SPECIAL ELEMENTARY AND SECONDARY SCHOOLS

Schools that are organized and administered to offer instruction to a special population, or which offer an alternative to the typical elementary and secondary school.

201 Adult-Basic Education School

A school which is organized for adults or youth who are beyond the compulsory school attendance age and which has a concern for developing the fundamental tools for living for those who have never attended school, or who have interrupted their formal schooling and need to increase their skills to a more efficient level.

202 Chemical Dependency School

A residential school for students with drug-related or narcotics problems.

203 Instructional Home or School for Adolescents

A residential institution for boys or girls who are experiencing socio-behavioral problems.

204 Hospital School

A residential school housed in a health care facility for students with serious emotional, physical, or learning difficulties.

205 Native American School

A school for students who are native Americans.

206 Alternative School

A school which provides instruction to students in ways that exist as alternatives to the typical elementary and secondary school. Approaches will vary from those which provide maximum freedom for the pursuit of students' interests, emphasizing a number of specialized interest areas, to those which are characterized by traditional, formalized classrooms in which discipline is emphasized.

207 Correctional Institution

Institutions which provide elementary and secondary instruction for children and adults who are committed for the correction of inappropriate patterns of social behavior.

208 School for Learning Disabled

A school which provides instruction for students with learning disabilities involving cognitive processes, marked underachievement, brain injury, perceptual handicaps, or minimal brain dysfunction.

209 School for Mentally Handicapped

A school which provides instruction for students who have mental handicaps and are classed as educable, trainable, or severely mentally handicapped.

210 School for Multiple Handicapped

A school which provides instruction for students with two or more handicaps, including any combination of mental, physical, emotional, or other handicaps.

211 School for Physically Handicapped

A school which provides instruction for students with one or more physical handicaps, such as impaired hearing, blindness, and speech handicaps.

212 School for Socially or Emotionally Handicapped

A school which provides instruction for students who have social or emotional handicaps and who may be delinquent prone.

299 Other Special Elementary and Secondary Schools (Specify)

300 POSTSECONDARY VOCATIONAL-TECHNICAL SCHOOLS

Schools which provide instruction beyond secondary school, usually following grade 12, in one or more semiskilled, skilled, or technical occupations for adults and youth beyond the age of compulsory school attendance.

301 Comprehensive Vocational-Technical School

A school which offers diversified occupational education programs, including related academic offerings, generally at less than the baccalaureate level.

302 Technical Institute

An institution, or a division of an institution, providing instruction in one or more of the technologies at the postsecondary instructional level.

303 Business or Commercial School

A nonpublic educational institution offering courses in preparation for business occupations such as stenography, bookkeeping, and data processing.

304 Cosmetology School

A school which offers programs in beauty treatment, including care and beautification of the hair, complexion, and hands.

305 Flight School

A school which offers programs in technical fields related to aviation, such as aircraft mechanic and pilot training.

306 Trade School

A school which offers programs in one or more of the skilled trades.

307 Health Training School

A school which offers programs in one or more of the medical or paramedical occupations, many of which are affiliated with a health care facility, such as a hospital, clinic, or sanitarium.

308 Recreation School

A school which offers programs in recreational subject-matter areas such as mountain climbing, boating, and arts and crafts.

309 Real Estate School

A school which offers programs in real estate, including selling techniques, property assessment, and real estate financing.

399 Other Postsecondary Vocational-Technical Schools (Specify)

400 COMMUNITY AND JUNIOR COLLEGES

An institution of higher education which usually offers the first two years of college instruction and career education, grants an associate degree, and does not award a baccalaureate degree.

401 Comprehensive Community and Junior Colleges

A community or junior college which offers a wide range of both academic and vocational programs, and in which the number of degrees or certificates awarded in occupational or vocational areas is greater than 30% but less than 80% of all those awarded.

402 Transfer-Oriented Community and Junior Colleges

A community or junior college which offers academic programs for transfer credit into baccalaureate programs in other institutions, and in which the number of degrees or certificates awarded in occupational and vocational areas is less than 30% of all those awarded.

499 Other Community and Junior Colleges (Specify)

500 GENERAL BACCALAUREATE COLLEGES

An institution which does not have doctoral or master's degree programs but which offers and awards a bachelor's degree.

600 COMPREHENSIVE COLLEGES AND UNIVERSITIES

An institution having no doctoral programs but which offers and awards a master's degree and possibly a specialist's degree.

700 DOCTORAL GRANTING UNIVERSITIES

A university which offers and awards doctoral degrees. This would include any institution devoting resources to a doctoral program regardless of whether a degree was actually awarded.

800 PROFESSIONAL SCHOOLS

Institutions which offer programs in one or more related professional areas at least at the baccalaureate level.

801 Divinity School

An institution which specializes in offering programs at the baccalaureate level or above for religious professions.

802 Medical School

An institution which specializes in offering programs at the baccalaureate level or above for medical professions.

803 Health Professions School

An institution which specializes in offering programs at the baccalaureate level or above in health professions such as Dentistry, Optometry, Osteopathy, Podiatry, Veterinary Medicine, Nursing, Public Health, Pharmacy, Chiropractic Medicine, and Professional Psychology.

804 Engineering and Technology School

An institution which specializes in offering programs at the baccalaureate level or above for Engineering and Technology.

805 Business and Management School

An institution which specializes in offering programs at the baccalaureate level or above for Business and Management.

806 Art, Music, and Design School

An institution which specializes in offering programs at the baccalaureate level or above for Art, Music, and Design.

807 Law School

An institution which specializes in offering programs at the baccalaureate level or above for law professions.

808 Teachers College

A four-year college, offering courses for the training of primary and secondary school teachers, which grants the bachelor's and, sometimes, advanced degrees.

809 Service Academy

An institution which specializes in offering programs at the baccalaureate level or above in selected Military Sciences.

899 Other Professional Schools (Specify)

900 SPECIALIZED SCHOOLS AND LEARNING CENTERS

Organizational units which provide instruction in a very specialized subject-matter area, or in which instruction is other than a primary objective, including such things as foreign language schools, teacher centers, libraries, museums, art galleries, labor unions, and industrial organizations.

APPENDIX D
TYPE OF INSTRUCTIONAL PROGRAM

An instructional program is a combination of courses and experiences that is designed to accomplish a predetermined objective or set of allied objectives such as preparation for advanced study, qualification for an occupation or range of occupations, or simply the increase of knowledge and understanding.

Instructional programs must be differentiated from subject matter. Entries in the subject-matter classification often have the same designations as those of programs. But the similarity of designation should not confuse the fundamental differences between the two. Subject matter is the substance of knowledge. In contrast, programs constitute the form and style by which knowledge, or subject matter, is taught and learned. In most instances, but by no means all, instructional programs can be defined in terms of the subject matter of which they are composed. In other cases, experiences such as internships, practicums, and field trips constitute the form and style of programs.

The main body of the Classification is devoted to subject matter, not programs. But in the development of the subject-matter classification, substantial attention to programs was required. Although distinctions between programs and subject matter are basic, they are nevertheless troublesome because of the generally common terminology.

A list of instructional programs is presented in this appendix to assist in describing subject matter. When reporting data about Mathematics, for example, the addition of program codes to subject-matter codes will help to define contextual differences in the knowledge that is being presented.

The instructional programs listed in this appendix illustrate the way in which other programs might be classified across the full range of education. The list is limited to those specific program areas that have been of major concern to those responsible for program data collection and analysis. Particular attention is given to vocational education and special education. For these two program areas, the appendix presents sufficient detail for use as an interim reporting structure. As such, appendix D can resolve the immediate problem of overlap between Handbook VI and the HEGIS Taxonomy until more comprehensive program classification structures are developed for elementary, secondary, and postsecondary education. Revised program classifications are now being considered for future development.

The interim nature of the program classificatons in this appendix should be stressed for they were developed primarily to illustrate the role that programs will have in helping to define and describe subject matter. The illustrative list of programs did not have the benefit of the broadly based consultative procedures used in the development of the subject-matter classification, although advice was received from experts in vocational and special education.

Substantially more consideration should be given to the many issues concerned with program classification than has been possible in the context of this subject-matter classification. There are many ways of classifying programs. Some might argue that program classifications should emphasize vocational, avocational, or academic objectives. Others would emphasize such program aspects as mode of delivery. As an illustrative array, the list of programs in this appendix does not presume to serve as the forerunner of future program classification schemes.

01 VOCATIONAL EDUCATION

01.01 AGRICULTURE

01.01 01	Agricultural Production
01.01 02	Agricultural Supplies and Services
01.01 03	Agricultural Mechanics
01.01 04	Agricultural Products
01.01 05	Ornamental Horticulture
01.01 06	Agricultural Resources
01.01 07	Forests
01.01 99	Other Agriculture (Specify)

01.02 DISTRIBUTIVE EDUCATION

01.02 01	Advertising Services
01.02 02	Apparel and Accessories
01.02 03	Automotive
01.02 04	Finance and Credit
01.02 05	Floristry
01.02 06	Food Distribution
01.02 07	Food Services
01.02 08	General Merchandise
01.02 09	Hardware, Building Materials, Farm and Garden Supplies and Equipment
01.02 10	Home Furnishings
01.02 11	Hotel and Lodging
01.02 12	Industrial Marketing
01.02 13	Insurance
01.02 14	International Trade
01.02 15	Personal Services
01.02 16	Petroleum
01.02 17	Real Estate

01.02 18 Recreation and Tourism
01.02 19 Transportation
01.02 99 Other Distributive Education (Specify)

01.03 HEALTH OCCUPATIONS

01.03 01 Dental
01.03 02 Medical Laboratory Technology
01.03 03 Nursing
01.03 04 Rehabilitation
01.03 05 Radiologic
01.03 06 Ophthalmic
01.03 07 Environmental Health
01.03 08 Mental Health Technology
01.03 99 Other Health Occupations Programs (Specify)

01.04 HOME ECONOMICS

01.04 01 Homemaking
01.04 02 Occupational Preparation
01.04 03 Care and Guidance of Children
01.04 04 Clothing Management, Production, and Services
01.04 05 Home Furnishings, Equipment and Services
01.04 06 Institutional and Home Management and Supporting Services
01.04 99 Other Home Economics (Specify)

01.05 OFFICE OCCUPATIONS

01.05 01 Accounting and Computing Occupations
01.05 02 Business Data Processing Occupations
01.05 03 Filing, Office Machines, and General Office Clerical Occupations
01.05 04 Information Communication Occupations
01.05 05 Materials Support Occupations
01.05 06 Personnel, Training, and Related Occupations
01.05 07 Stenographic, Secretarial, and Related Occupations
01.05 08 Supervisory and Administrative Management Occupations
01.05 09 Typing and Related Occupations
01.05 99 Other Office Occupations (Specify)

01.06 TRADES AND INDUSTRIAL

01.06 01 Air Conditioning
01.06 02 Appliance Repair
01.06 03 Automotive Services
01.06 04 Aviation Occupations
01.06 05 Blueprint Reading
01.06 06 Business Machine Maintenance
01.06 07 Commercial Art Occupations
01.06 08 Commercial Fishery Occupations
01.06 09 Commercial Photography Occupations
01.06 10 Construction and Maintenance Trades
01.06 11 Custodial Services
01.06 12 Diesel Mechanics
01.06 13 Drafting Occupations
01.06 14 Electrical Occupations
01.06 15 Electronic Occupations
01.06 16 Fabric Maintenance Services
01.06 17 Foremanship, Supervision, and Management Development
01.06 18 Graphic Arts Occupations
01.06 19 Industrial Atomic Energy Occupations
01.06 20 Instrument Maintenance and Repair Occupations
01.06 21 Maritime Occupations
01.06 22 Metalworking Occupations
01.06 23 Metallurgy Occupations
01.06 24 Personal Services
01.06 25 Plastics Occupations
01.06 26 Public Service Occupations
01.06 27 Quantity Food Occupations
01.06 28 Refrigeration
01.06 29 Small Engine Repair
01.06 30 Stationary Energy Sources Occupations
01.06 31 Textile Production and Fabrication
01.06 32 Leatherworking
01.06 33 Upholstering
01.06 34 Woodworking Occupations
01.06 99 Other Trade and Industrial Occupations (Specify)

01.07 TECHNICAL EDUCATION

01.07 01 Engineering-Related Technology
01.07 02 Agricultural-Related Technology
01.07 03 Health-Related Technology
01.07 04 Office-Related Technology
01.07 05 Home Economics-Related Technology
01.07 99 Other Technical Education (Specify)

02 INDUSTRIAL ARTS

02.01 CONSTRUCTION

02.02 CRAFTS

02.03 DRAFTING

02.04 ELECTRICITY AND ELECTRONICS

02.05 ELEMENTARY SCHOOL INDUSTRIAL ARTS

02.06 GENERAL INDUSTRIAL ARTS

02.07 HOME MECHANICS

02.08 INDUSTRIAL ARTS MATHEMATICS

02.99 OTHER INDUSTRIAL ARTS (SPECIFY)

03 SPECIAL EDUCATION

03.01 EARLY EDUCATION OF THE HANDICAPPED

03.02 EMOTIONALLY HANDICAPPED

03.03 GIFTED AND TALENTED

03.04 HEARING HANDICAPPED

03.05 LEARNING DISABLED

03.06 MENTALLY HANDICAPPED

03.07 MULTIPLE HANDICAPPED

03.08 PHYSICALLY HANDICAPPED

03.09 SEVERELY HANDICAPPED

03.10 SOCIALLY HANDICAPPED

03.11 SPEECH HANDICAPPED

03.12 VISUALLY HANDICAPPED

03.99 OTHER SPECIAL EDUCATION (SPECIFY)

01 VOCATIONAL EDUCATION

A combination of courses and learning experiences organized for the purpose of preparing, upgrading, or retraining youth and adults for employment in entry, supervisory, or operational management occupations not requiring a baccalaureate degree.

01.01 AGRICULTURE

A combination of courses and learning experiences organized for the purpose of enabling students to have the background, knowledge, and skills necessary for entry into a wide range of agriculturally-related occupations.

01.01 01 Agricultural Production
01.01 02 Agricultural Supplies and Services
01.01 03 Agricultural Mechanics
01.01 04 Agricultural Products
01.01 05 Ornamental Horticulture
01.01 06 Agricultural Resources
01.01 07 Forests
01.01 99 Other Agriculture (Specify)

01.02 DISTRIBUTIVE EDUCATION

A combination of courses and learning experiences organized for the purpose of preparing students to perform activities that direct the flow of goods and services, including their appropriate utilization, from the producer to the consumer or user.

01.02 01 Advertising Service
01.02 02 Apparel and Accessories
01.02 03 Automotive
01.02 04 Finance and Credit
01.02 05 Floristry
01.02 06 Food Distribution
01.02 07 Food Services
01.02 08 General Merchandise
01.02 09 Hardware, Building Materials, Farm and Garden Supplies and Equipment
01.02 10 Home Furnishings
01.02 11 Hotel and Lodging
01.02 12 Industrial Marketing
01.02 13 Insurance
01.02 14 International Trade
01.02 15 Personal Services
01.02 16 Petroleum
01.02 17 Real Estate
01.02 18 Recreation and Tourism
01.02 19 Transportation
01.02 99 Other Distributive Education (Specify)

01.03 HEALTH OCCUPATIONS

A combination of courses and learning experiences organized to provide students with the knowledge, skills, and understanding required by occupations that support the health professions.

01.03 01 Dental
01.03 02 Medical Laboratory Technology
01.03 03 Nursing
01.03 04 Rehabilitation
01.03 05 Radiologic
01.03 06 Ophthalmic
01.03 07 Environmental Health
01.03 08 Mental Health Technology
01.03 99 Other Health Occupations Programs (Specify)

01.04 HOME ECONOMICS

A combination of courses and learning experiences organized for the purpose of enabling students to acquire knowledge and develop understanding, attitudes, and skills relevant to personal, home, and family life, and to home economics occupations.

01.04 01 Homemaking
01.04 02 Occupational Preparation
01.04 03 Care and Guidance of Children
01.04 04 Clothing Management, Production, and Services
01.04 05 Home Furnishings, Equipment, and Services
01.04 06 Institutional and Home Management and Supporting Services
01.04 99 Other Home Economics (Specify)

01.05 OFFICE OCCUPATIONS

A combination of courses and learning experiences organized for the purpose of preparing, upgrading, or retraining students for selected office occupations.

01.05 01 Accounting and Computing Occupations

01.05 02 Business Data Processing Occupations
01.05 03 Filing, Office Machines, and General Office Clerical Occupations
01.05 04 Information Communication Occupations
01.05 05 Materials Support Occupations
01.05 06 Personnel, Training, and Related Occupations
01.05 07 Stenographic, Secretarial, and Related Occupations
01.05 08 Supervisory and Administrative Management Occupations
01.05 09 Typing and Related Occupations
01.05 99 Other Office Occupations (Specify)

01.06 TRADES AND INDUSTRIAL

A combination of courses and learning experiences organized for the purpose of preparing students for initial employment in a wide range of trade and industrial occupations.

01.06 01 Air Conditioning
01.06 02 Appliance Repair
01.06 03 Automotive Services
01.06 04 Aviation Occupations
01.06 05 Blueprint Reading
01.06 06 Business Machine Maintenance
01.06 07 Commercial Art Occupations
01.06 08 Commercial Fishery Occupations
01.06 09 Commercial Photography Occupations
01.06 10 Construction and Maintenance Trades
01.06 11 Custodial Services
01.06 12 Diesel Mechanics
01.06 13 Drafting Occupations
01.06 14 Electrical Occupations
01.06 15 Electronic Occupations
01.06 16 Fabric Maintenance Services
01.06 17 Foremanship, Supervision, and Management Development
01.06 18 Graphic Arts Occupations
01.06 19 Industrial Atomic Energy Occupations
01.06 20 Instrument Maintenance and Repair Occupations
01.06 21 Maritime Occupations
01.06 22 Metalworking Occupations
01.06 23 Metallurgy Occupations
01.06 24 Personal Services
01.06 25 Plastics Occupations
01.06 26 Public Service Occupations
01.06 27 Quantity Food Occupations
01.06 28 Refrigeration
01.06 29 Small Engine Repair
01.06 30 Stationary Energy Sources Occupations
01.06 31 Textile Production and Fabrication
01.06 32 Leatherworking
01.06 33 Upholstering
01.06 34 Woodworking Occupations
01.06 99 Other Trade and Industrial Occupations (Specify)

01.07 TECHNICAL EDUCATION

A combination of courses and learning experiences organized for the purpose of preparing students for job opportunities in a specialized field of technology.

01.07 01 Engineering-Related Technology
01.07 02 Agricultural-Related Technology
01.07 03 Health-Related Technology
01.07 04 Office-Related Technology
01.07 05 Home Economics-Related Technology
01.07 99 Other Technical Education (Specify)

02 INDUSTRIAL ARTS

A combination of courses and learning experiences organized for the development of understanding about all aspects of industry and technology; including activities such as experimenting, designing, constructing, and evaluating; and using tools, machines, materials, and processes which may assist individuals in the making of informed and meaningful occupational choices, or may prepare them for entry into advanced trade and industrial or technical education programs.

02.01 CONSTRUCTION

A combination of courses and learning experiences organized to provide students with information and skills concerned with constructing residential, industrial, and transportation structures.

02.02 CRAFTS

A combination of courses and learning experiences organized to provide students with information and skills concerned with the craft industry, including the tools, materials, processes, products, and occupations of the industry.

02.03 DRAFTING

A combination of courses and learning experiences organized to provide students with information and skills concerned with conveying ideas or illustrations graphically through drawings, charts, sketches, maps, and graphs.

02.04 ELECTRICITY AND ELECTRONICS

A combination of courses and learning experiences organized to provide students with information and skills concerned with electrical energy, including theory, applications, and control as they relate to various kinds of electrically-powered equipment and systems.

02.05 ELEMENTARY SCHOOL INDUSTRIAL ARTS

A combination of courses and learning experiences organized to provide students in an elementary school with opportunities for exploration, manipulation, experimentation, planning, and using tools, materials, and techniques appropriate to converting materials to serve useful purposes.

02.06 GENERAL INDUSTRIAL ARTS

A combination of courses and learning experiences organized to provide students with opportunities for experimenting, designing, constructing, evaluating, and using a variety of tools, materials, and processes.

02.07 HOME MECHANICS

A combination of courses and learning experiences organized to provide students with information and skills concerning the study of tools, materials, and processes involved in the upkeep and repair of the home, its equipment, and devices.

02.08 INDUSTRIAL ARTS MATHEMATICS

A combination of courses and learning experiences organized to provide students with information and skills involving various applications of arithmetic, informal algebra, and informal geometry which apply particularly to shop problems.

02.99 OTHER INDUSTRIAL ARTS (SPECIFY)

03 SPECIAL EDUCATION

A combination of courses and learning experiences organized to meet the needs of those students whose physical, emotional, mental, or social handicaps or conditions require a special curriculum or educational setting.

03.01 EARLY EDUCATION OF THE HANDICAPPED

A combination of courses and learning experiences organized to meet the educational needs of handicapped students whose ages range from birth to the time a child would normally complete the third grade.

03.02 EMOTIONALLY HANDICAPPED

A combination of courses and learning experiences organized to meet the educational needs of students exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance: (a) an inability to learn, which cannot be explained by intellectual, sensory or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; or (e) a tendency to develop physical symptoms or fears associated with personal or school problems. This category includes children who are schizophrenic or autistic. This category does not include children who are socially maladjusted, unless it is determined that they are emotionally disturbed.

03.03 GIFTED AND TALENTED

A combination of courses and learning experiences organized to meet the educational needs of students capable of high performance, including those with demonstrated achievement or ability in any one or more of these areas—general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, or psychomotor ability.

03.04 HEARING HANDICAPPED

A combination of courses and learning experiences organized to meet the educational needs of students who have an impairment in hearing, as follows: (a) "deaf" means a hearing impairment which is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance; (b) "hard of hearing" means a hearing impairment, whether permanent or fluctuating, which affects a child's educational performance but which is not included under the definition of "deaf" in this section.

03.05 LEARNING DISABLED

A combination of courses and learning experiences organized to meet the educational needs of students who have disorders in one or more of the basic psychological processes involved in understanding or in the use of language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, spell, or to do mathematical calculations. This category includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. This category does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural or economic disadvantage.

03.06 MENTALLY HANDICAPPED

A combination of courses and learning experiences organized to meet the educational needs of students whose impaired mental development adversely affects their educational performance.

03.07 MULTIPLE HANDICAPPED

A combination of courses and learning experiences organized to meet the educational needs of students who have a combination of handicaps that adversely affects their educational performance.

03.08 PHYSICALLY HANDICAPPED

A combination of courses and learning experiences organized to meet the educational needs of students who have severe physical impairments which adversely affect their educational performance.

03.09 SEVERELY HANDICAPPED

A combination of courses and learning experiences organized to meet the educational needs of students who, because of the intensity of their physical, mental, or emotional problems, or a combination of such problems, need educational, social, psychological and medical services beyond those which are traditionally offered by regular and special educational programs in order to maximize their full potential for useful and meaningful participation in society.

03.10 SOCIALLY HANDICAPPED

A combination of courses and learning experiences organized to meet the educational needs of students whose behavior may be in conflict with norms of home, school, or com-

munity but is not in conflict with subgroup norms and is not related to personal distress.

03.11 SPEECH HANDICAPPED

A combination of courses and learning experiences organized to meet the educational needs of students who have a speech impairment or a language impairment which adversely affects their educational performance.

03.12 VISUALLY HANDICAPPED

A combination of courses and learning experiences organized to meet the educational needs of students who have a visual impairment which adversely affects their educational performance.

03.99 OTHER SPECIAL EDUCATION (SPECIFY)

APPENDIX E
MULTIPLE SUBJECT MATTER (INTERDISCIPLINARY)

Each of the elements in the Classification of Educational Subject Matter represents a unique and mutually restrictive segment of knowledge. Sometimes, courses and other basic units of instruction are composed of two or more subject-matter elements. The combinations are called multiple-subject matter or interdisciplinary instruction. They may involve first-order, second-order, third-order, or fourth-order elements or any mixture of them.

Given that there are several thousand unique subject-matter elements, the number of combinations into which they may be formed could be enormous. Such combinations may reflect the expertise and interests of faculty, the demands of students, or the distribution of resources. The affecting variables may differ from institution to institution, resulting in countless combinations. Data about multiple-subject matter may be recorded or reported for the combinations, or proportionately for the individual subject-matter elements which compose them.

The coding, recording, and reporting of multiple subject matter *within* a subject-matter area will differ from that for combinations of subject matter *between* two subject-matter areas. The differences in the two procedures are explained and illustrated below.

COMBINATIONS WITHIN SUBJECT-MATTER AREAS

Multiple subject matter within a subject-matter area involves combinations of separate and different second-order, third-order, or fourth-order elements. Each of the elements retains its identity and can be separated out of the combination. The aggregation of subject-matter subelements into a single higher-order element does not constitute multiple-subject matter as illustrated below. Aggregate subject matter is described in the Introduction section of the Classification.

Multiple Subject Matter		Aggregate Subject Matter	
01.06 05 00	Plant Nutrition, and	01.07 01	Soil Chemistry
01.07 01 00	Soil Chemistry	01.07 04	Soil Fertility
—To be Reported as Plant Nutrition and Soil Chemistry		— To be Reported as Soil Sciences	

The existence of multiple subject matter may be common, but the recording and reporting of it may not be. If, as defined, the elements are unique and can be separated out of as separate elements. Data about the elements may then be recorded and reported as a fraction or percentage of the multiple subject matter combination. Multiple subject matter codes should only be used when it is necessary to report the combination as a single unit.

If data are to reflect multiple subject matter within a subject-matter area, a new coding structure should be used that utilizes alphabetic and numeric characters. For the most part, this will permit the use of no more than eight characters as is the case in the main body of the Classification. Alternatively, use of the numerical Classification codes to identify multiple subject matter combinations would require multiples of eight digits and would result in very large numbers.

In the subject-matter area of Agriculture and Renewable Natural Resources which is used as the illustration for this appendix, each second-order element is given an alphabetic designation. Third-order and fourth-order elements are numbered sequentially as they appear within the second-order categories. If only second-order elements make up the multiple subject matter listing, only the alphabetic characters will be used. The numerical, two-digit designation of the first-order subject-matter area will precede the six-character multiple subject matter designation, providing a total of eight characters in most cases.

The examples below illustrate combinations of elements in the subject-matter area of Agriculture and Renewable Natural Resources. The codes are taken from the subject-matter structure which appears at the end of this appendix. Spacing of the codes has been done to better illustrate the combinations.

MSM Code	Examples of Combinations Within a Subject-Matter Area
01. C06 F04	Agricultural Storage; Plant management and Production (two third-order elements)
01. H02 L02	Fisheries Management; Wildlife Management (two third-order elements)
01. E G03 xx	Ornamental Horticulture; Soil Conservation and Land Use (second-order and third-order elements)
01. CEF xxx	Agricultural Technology; Ornamental Horticulture; Plant Sciences (three second-order elements)

COMBINATIONS BETWEEN SUBJECT-MATTER AREAS

Elements from different subject-matter areas can also be combined to form multiple subject matter. By definition,

each of the elements will retain its identity and can be separated out of the combination.

It is quite likely that data about combinations between subject-matter areas may be reported in proportion to the relationship of the elements in the combinations. Credits, hours, or dollars may be apportioned to the respective elements and reported as such. If, however, reporting of the combination is preferred, the following code structure should be utilized.

The first two digits, "88", emphasize that the combinations are not within an existing subject-matter area. These digits are followed by the first element in the combination – a two-digit subject-matter area code and the alphabetic character for a second-order element; followed in turn by the second element in the combination.

The three most common types of combinations that can be made between subject-matter areas using the suggested coding structure are shown below. Again, spacing of the codes was done to illustrate the combinations.

MSM Code	Combinations
88.01A 04C	Agricultural Economics; Banking and Finance (two second-order elements within separate subject-matter areas)
88.01 04 xx	Agriculture and Renewable Natural Resources, and Business (two separate subject-matter areas)
88.01 04 08	Agriculture and Renewable Natural Resources, Business, and Engineering and Engineering Technology (three separate subject-matter areas)

Three or more second-order elements cannot be combined with the present coding structure and format if only the eight-character format is adhered to.

Additional examples of combinations between subject-matter areas are shown below:

MSM Code	Examples of Combinations Between Subject-Matter Areas
88.01A 04C	Agricultural Economics; Banking and Finance (two second-order elements)
88.02C 08C	Construction and Design Implementation; Architectural Engineering and Technology (two second-order elements)
88.04J 20x	Marketing; Psychology (one second-order, one first-order)
88.06 16 xx	Computer Science and Data Processing; Mathematical Sciences (two subject-matter areas or first-order elements)
88.01D 09H	Animal Sciences; Veterinary Medical Sciences (two second-order elements)
88.05F 13C	Journalism; Constitutional Law (two second-order elements)
88.07K 20E	Educational Evaluation and Research; Psychology of the Individual; (two second-order elements)
88.03C 18P	Music; Pastoral Studies (two second-order elements)
88.08R 170	Marine Engineering and Naval Architecture; Navy (two second-order elements)
88.21A 22E	Public Administration; Political Science and Government (two second-order elements)

APPLICATION OF MULTIPLE SUBJECT-MATTER CODING

As an illustrative example, the combined alpha-numeric coding structure as described in the paragraphs above has been applied to the subject-matter area of Agriculture and Renewable Natural Resources. The multiple subject-matter codes should only be used when the unique and distinct subject-matter elements are not to be broken out of the multiple subject matter combination.

Subject-Matter Classification Code	Subject-Matter Elements	Multiple Subject-Matter Code
01.01	**AGRICULTURAL ECONOMICS**	A
01.01 01	Agricultural Appraisal	A01
01.01 02	Agricultural Credit and Finance	A02
01.01 03	Agricultural Marketing	A03
01.01 04	Agricultural Organizations	A04
01.01 05	Agricultural Supplies	A05
01.01 06	Economic Development and International Trade	A06
01.01 07	Farm and Ranch Management	A07
01.01 08	Public Policy and Agriculture	A08
01.01 99	Other Agricultural Economics (Specify)	A99
01.01	**AGRICULTURAL ENGINEERING** (See 08 – Engineering and Engineering Technology)	B
01.03	**AGRICULTURAL TECHNOLOGY**	C
01.03 01	Agricultural Design, Construction, and Maintenance	C01
01.03 02	Agricultural Electrification	C02
01.03 03	Agricultural Materials Handling	C03
01.03 04	Agricultural Mechanics	C04
01.03 05	Agricultural Processing	C05
01.03 06	Agricultural Storage	C06
01.03 07	Agricultural Transportation	C07
01.03 08	Agricultural Waste Control	C08
01.03 99	Other Agricultural Technology (Specify)	C99
01.04	**ANIMAL SCIENCES**	D
01.04 01	Animal Anatomy and Physiology	D01
01.04 02	Animal or Animal Products Selection and Evaluation	D02
01.04 03	Animal Diseases, Parasites, and Insects	D03
01.04 04	Animal Genetics and Reproduction	D04
01.04 05	Animal Health and Care	D05
01.04 06	Animal Management and Production	D06
01.04 07	Animal Nutrition	D07
01.04 99	Other Animal Sciences (Specify)	D99
01.05	**ORNAMENTAL HORTICULTURE**	E
01.05 01	Arboriculture	E01
01.05 02	Floriculture	E02

01.05 03	Greenhouse and Nursery	E03
01.05 04	Landscaping	E04
01.05 05	Turf Grass	E05
01.05 99	Other Ornamental Horticulture (Specify)	E99
01.06	**PLANT SCIENCES**	F
01.06 01	Plant Anatomy and Physiology	F01
01.06 02	Plant Genetics and Reproduction	F02
01.06 03	Plant Insects and Control	F03
01.06 04	Plant Management and Production	F04
01.06 04 01	Production of Field Crops	F05
01.06 04 02	Production of Fruits	F06
01.06 04 03	Production of Specialty Crops	F07
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GLOSSARY

Aggregate—The process of gathering together distinct but similar elements into a commonly designated higher order cluster.

Award—A certificate, diploma, or degree conferred upon a student by an educational institution upon successful completion of an instructional program.

Coding Structure—The format and procedures for identifying items by a means of numeric, alphabetic, or alphanumeric symbols in a logical and sequential manner.

Comparability—The characteristic of commonality among or between selected elements measured in terms of identical constants. The accuracy of the measurement of the degree of comparability is usually dependent on the number of constants applied.

Compatibility—The condition that requires two or more elements to be technically related. They must be defined the same, be capable of being measured the same, and be aggregated and summarized the same.

Course—An organization of subject matter and related learning experiences provided for the instruction of students on a regular or systematic basis, usually for a predetermined period of time as in a semester, a quarter, or a regular school term.

Disaggregate—The process of dispersing a cluster of elements into distinct but similar elements of a lower order than the original group.

Educational Institution—A public, private, or proprietary organization or establishment devoted to the promotion, development, and attainment of learning at one or more levels of instruction, and embracing such designations as school, college, institute, or university.

Genetic (Genesis)—The term which characterizes the emergence of subject-matter elements from a single origin and the establishment of that origin as a distinct subject-matter area.

Hierarchy—Any system of related elements arranged in rank order of prominence, of sequence or generic development, or other characteristic which allows aggregation of lower elements into higher order clusters.

Instructional Program—A plan of one or more courses or combination of courses and procedures designed to accomplish a predetermined objective or set of allied objectives, such as preparation for advanced study, qualification for an occupation or range of occupations, or solely to increase knowledge or understanding.

Interlay—A structure of subject-matter elements at one order which when combined with a structure of a higher or lower order, allows for greater diversity of subject-matter data identification.

Level of Subject-Matter Instruction—An indication of the general nature and difficulty of instruction, usually identified by the designation of a grade or year in an organized educational system.

Multiple Subject-Matter Elements—Subject matter which consists of equal, or nearly equal, portions of separate and distinct subject-matter elements.

Order—A term which identifies the vertical position of an element in a hierarchical array.

Organizational Unit—A school, institution, or establishment that exercises control over the provision of courses or other curriculum subject matter.

Student—An individual for whom instruction is provided in an educational program under the jurisdiction of an educational institution. The terms student and pupil are often used interchangeably.

Subject-Matter Areas—The most aggregate entries of subject matter which form the basic structure of an array of mutually restrictive categories of knowledge.

Subject-Matter Descriptor—The word or words that are used to identify individual subject-matter elements at any level within a hierarchical array of knowledge.

Subject-Matter Element—A single, discrete unit of subject matter representing a designated component of the substance of knowledge.

Taxonomy—The science which deals with the laws and principles of classification according to natural relationships which can be hierarchical in nature. The term has also been included in the titles of such classifications.

Technology—The study of the practical applications of knowledge which emanate from the theoretical constructs of subject matter.

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